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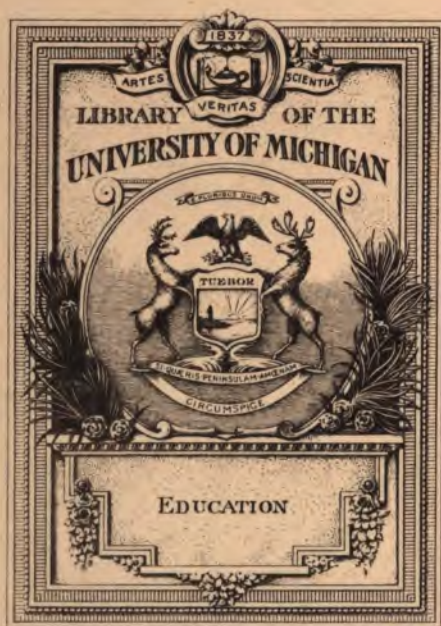
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PRACTICE EXERCISES
IN SUPERVISED STUDY AND
ASSIMILATIVE READING



WILEY



MODERN SERIES ON
STUDY AND ASSIMILATIVE READING
EDITED BY J. A. WILEY

**PRACTICE EXERCISES
IN SUPERVISED STUDY AND
ASSIMILATIVE READING**

A GUIDE FOR DIRECTING
THE FORMATION OF EFFICIENT
STUDY HABITS

BY

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PREFACE.

Suggested Uses of the Book

This book is prepared for the guidance of those teachers who wish to give definite training for improving the study habits of their pupils. It can readily be used as the basis of a correspondence course for the professional improvement of teachers in the service, or it may be used in teacher-training classes as the basis for giving prospective teachers preliminary training in the supervision of study. It will doubtless find its widest use as an aid in the individual teacher's attempt to improve the study habits of her own pupils through systematic training.

The book shows not only how study activities may be effectively directed, but also how the recitation period may be used for properly supplementing the results secured during the study period. The activities of the study period and those of the recitation period must supplement and re-inforce one another at every possible opportunity, if the best returns are to be secured from both periods.

The suggested practice exercises can be used to advantage in connection with any content subject from the fifth grade on up through high school. Of course the degree of emphasis placed upon each type

of exercise will vary as we pass to the higher grades. Many of the exercises may be found helpful for those college students who have not had adequate training in how to study. The exercises are intended for use in connection with content subjects which employ largely the thought-getting type of study. They will also be found to be especially useful in connection with upper grade reading of the assimilative type. The writer has used this material with his Educational Psychology class for the two-fold purpose of making his students better acquainted with the nature of the thought-getting process, and of putting before them effective methods of supervising study. The discussions were put before the class in lecture form, and the procedures were illustrated and discussed by the teacher.

These exercises were first used in mimeographed form as the basis of a correspondence course for vocational teachers in the service. The directions for reporting were used as the means of keeping us in touch with the course as it was being carried out by the teachers. The directions have been retained for the use of those departments which may wish to use this book as the basis of a similar correspondence course. Those teachers who wish to use the exercises merely for their own purposes in improving the study habits of their pupils can disregard the directions for reporting. But, even in such cases, it will prove very helpful to carry out the tests and checking-up, for the two-fold purpose of keeping up interest and keeping informed upon the progress being made.

Study Involves Specific Study Habits

This book is constructed on the theory that skillful study involves the use of a great variety of specific study habits, each of which must be built up in conformity with the laws of habit formation. We do not acquire a habit by being told about the procedures involved, but rather by practicing those procedures over and over until they are perfected and reduced to the habit level. Likewise, in learning to study, pupils must first be shown how to use each of the better specific study procedures, and then they must be directed through sufficient practice exercises to habituate these study procedures.

Study Habits Established through Directed Practice Exercises in Studying

Published books on how to study have given us much help in connection with the study problem by pointing out the various conditions favorable for efficient study, by explaining the meaning of study, by characterizing the various types of study, and by telling us how to study. But the mere setting forth of these matters is not enough to insure the development of efficient study habits. The telling must first be demonstrated and then followed up by directed practice until the particular study procedure becomes more or less habituated. Provision for supervised practice exercises on selected study procedures of established standing seems to be urgently needed as the most practical approach to the solution of the

study problem. This book attempts to meet that need in connection with some of the commoner procedures used in the reading type of study.

The types of training included have been selected from a list of some sixty-four of the better types of training in use in connection with silent reading. The writer first worked out the original list in synoptical form as a term paper at the University of Chicago in the fall of 1920. During the spring semester of 1922 much of the material of this book was used as the basis of a correspondence course for the professional improvement of the North Carolina State College graduates who were teaching vocational agriculture in high schools. The course met with the universal approval of those teachers who used it, and many other teachers sent in requests for the outlines, so that it seemed advisable to reorganize and expand the material for publication. The book necessarily treats a limited number of the more important study procedures. In time the writer hopes to treat the balance of the original list in a similar way. This book is intended as the first of a series of books setting forth practice exercises in various types of study.

Origin of the Plan of Approach

For a number of years the writer has been interested in the problem of teaching pupils how to study, and he has been impressed by the lack of definite guidance in handling this problem. The theoretical discussions of study sound well enough, but the pupils have great difficulty in finding a way to put

the discussions into actual practice. In instructing prospective teachers in methods of teaching children how to study, the writer has been struck by the utter helplessness of the majority of such students when it comes to planning and carrying out study exercises appropriate to the theoretical discussions usually given by books on study. What inexperienced teachers need is systematized guidance in planning and carrying out the more important types of study procedure. Enough discussion is needed to show the fundamental purposes and theories underlying the various exercises proposed.

By drawing upon the principles accumulated from the study of Methods and Educational Psychology for a number of years, beginning in the normal school and extending through three years of graduate work in the university, and by adjusting these principles to the practical experiences gained through eleven years of teaching experience involving practically every stage in our school system from country school to college teacher of Methods and Educational Psychology, the writer has evolved the exercises and discussions suggested in this book, as the practical means of meeting the above stated needs in connecting with some of the more important study procedures. It is realized that the exercises here proposed constitute only an imperfect beginning in this new field, but it is hoped that they may stimulate the formulation of further and better exercises along this supremely important line.

Acknowledgments

The writer wishes to express his special obligation to Professor S. C. Parker and Dean W. S. Gray, of the University of Chicago, to Professor L. E. Cook, head of the Department of Vocational Education in the North Carolina State College of Agriculture and Engineering, and to Professor M. M. Maynard of Monmouth College. Professor Parker not only encouraged the preparation of the material for publication, but also went over the manuscript and made many valuable suggestions relative to the final form of the material. Dean Gray read a part of the manuscript and made helpful suggestions relative to the clarification of the problems treated. Professor Cook read the material in its preliminary form and made suggestions looking to the adaptation of the material to the needs of vocational schools. Professor Maynard read the final manuscript and criticised it from the grammatical standpoint.

The writer has gathered many helpful suggestions from various magazine articles which deal with present-day methods of teaching silent reading, and from various textbooks on Educational Psychology and Methods. To these he can express his obligation only in a general way.

Finally, the writer wishes to recognize his great obligation to his wife, Eulalia Wilson Wiley, who offered helpful criticisms and suggestions in connection with each of the various sections of this material.

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SUPPLEMENTARY MATERIALS NEEDED

- I. Testing materials to be ordered before starting the course: (See pages listed, for addresses, amounts, etc.)
 - (1) Thorndike-McCall Reading Scale, pages

Form 4, with Tabulation and Directions	
Sheets	32
Form 2, with Tabulation and Directions	
Sheets	62
Form 3, with Tabulation and Directions	
Sheets	101
 - (2) Monroe Silent Reading Test, Revised,

Test 2, Form 1, with Class Record Sheets...	33
Test 2, Form 2, with Class Record Sheets...	49
Test 2, Form 3, with Class Record Sheets...	101
 - (3) Curtis Silent Reading Test,

Test 2, Form 3, with Record Slips, Folders, etc	33
Test 2, Form 1, with Record Slips, Folders, etc	44
Test 2, Form 2, with Record Slips, Folders, etc	101
- II. Special large Tabulation Sheets for recording and reporting the data obtained with each test given during the course (See footnote page 103).
- III. Correspondence Paper Checking Key for use by departments using this book as the basis of a correspondence course. A device calculated to save writing, time, and postage, and to render corrective directions more effective. (Being prepared by the writer for distribution at a nominal price).

PRACTICE EXERCISES IN SUPERVISED STUDY AND ASSIMILATIVE READING

CHAPTER I

INTRODUCTION

Main Points of the Chapter

1. The study problem can be solved only by habituating the specific type of study procedure most appropriate for each specific type of study material with which pupils must deal.
2. Study habits must be built up in accordance with the known principles of habit formation.
3. Supervised Study involves training in learning under the close supervision and guidance of a skilled teacher.
4. Comprehension in silent reading is the prime requisite in learning to study.
5. General directions applicable to all the exercises.
6. Cautions in regard to planning, carrying out, and reporting the suggested exercises.
7. Suggested time distribution of the exercises.
8. Studying and reciting must constantly supplement each other.

1. The Study Problem

Efficient studying involves the skilful use of those types of study procedure which result in the greatest amount of learning in particular study situa-

tions. Inability to learn under school conditions results in school failure, retardation, elimination, and many other problems. These evils are observed in all the different stages of our educational system. A little personal observation on the part of the teacher will show that most pupils have very queer notions of what study means. Common among the false notions of the meaning of study is the notion that studying is synonymous with memorizing. Another false notion is that studying consists in merely reading over the material a great number of times—a sort of “exposure” proposition. A little of such observation, supplemented by the results obtained with the preliminary testing, will show both the teacher and the class how urgent is the need of giving training for developing more efficient study habits.

There are three general kinds of study activities commonly utilized in our schools. These general types frequently overlap, so that they can not be completely isolated. First in point of chronological order, and predominant from the standpoint of frequency of use, comes the reading type of study. It is the predominant type wherever the study material is gleaned primarily from printed matter, and it constitutes an essential element in practically all studying from the intermediate grades on up through high school and college. A second type of study is the laboratory demonstration type, in which the study material is not taken directly from books, but is gotten mainly through objective observation of the facts and principles demonstrated by purposely planned

objective experiments. This type of study is becoming more common in connection with our science courses. A third general type of study involves the utilization of reflective thinking in connection with problem solving and the like. This type overlaps the reading type in all those cases where the solution of the problem depends primarily upon gathering material through reading printed matter. Indeed a clearly stated problem serves as the most effective aid in directing the discriminate selection and organization of study material. The problem solving method is frequently utilized for this purpose throughout this book, and is especially emphasized in connection with the exercises of the five chapters of Part II. This book is devoted primarily to the development of the reading type of study, because the reading type is not only the most frequently used on its own account, but is also a prerequisite to success in most of the other types of study. At a later date the writer hopes to supplement these exercises with other exercises intended to give specific training in the other two types of study.

In presenting the suggestions in this book the writer does not wish to minimize the supreme importance of intelligence, health, interest, effort, and *etc.* many other general factors in successful learning. Though it will be impossible to go further at present, nevertheless it may here be said that these are essential factors, and that without due attention to these all other efforts at training in studying may prove futile.

2. Habits of Study

✓ Our activities go on mostly through the functioning of habit, and habit is, in general, the outcome of practice. Education should first determine the habits that will be most useful throughout life, and then devise and carry out appropriate practice for establishing those habits in the lives of the pupils. In this age of the printing press, study habits of the reading type constitute a very important set of habits which will function throughout life. Therefore, our first care should be to select those types of study procedure which seem most effective in connection with assimilative reading and then reduce such procedures to habit through drill on appropriate practice exercises carried out according to the laws of habit formation.

Three essential principles of habit formation need brief mention at this point. In the first place, we must not depend too much upon establishing general habits. Training for specific habits, that is, practicing directly the thing to be done later, yields the surest results. This means that pupils must acquire study habits by practicing the specific study procedures in the specific kind of connections in which they are to be used later. In the second place, we must first make each correct study procedure fully conscious to the pupils, so that they get a clear pattern in mind, and then we must put the pupils through appropriate practice exercises until the habit level is attained. In other words, *pupils must learn to study by studying correctly* until the proper proce-

dure becomes habituated. Here it must be recognized that using knowledge or principles as a guide in practicing is one of the best methods of learning. Finally, we must take stock of what happens to consciousness when we form a habit. With practice the lower centers increasingly take over the function of directing the activity involved, and thus leave the higher thought centers relatively free for new or higher types of mental activity. Activities which at first engage full conscious attention are gradually taken over by the lower centers, and consciousness is correspondingly set free for attacking further problems. Not only is consciousness released for further activities, but each stage of habit serves as the stepping stone for attaining the next higher stage of development. The response also acquires greater perfection, accuracy, sureness, promptness, and strength as habit is perfected. This all comes about as results of the functioning of the so-called *laws of exercise*, of which *frequency* and *intensity* of practice are most important.

These three principles are observed in planning the exercises of this book. In the first place, it is urged that the exercises be planned and carried out as a part of the regular lesson preparation and recitation, so that pupils may learn to study by practicing the best study procedures under the direct supervision of the teacher. In agriculture classes this means specific supervised practice in learning to study the usual types of agricultural material. In history classes it means specific practice in studying history,

and so on for each content subject. Similar subjects will doubtless require similar study habits, but we can not safely rely much upon general training supposedly applicable to many subjects. We must consciously relate the appropriate study procedures to each subject and to each phase within each subject. If some transfer occurs, so much the better. We must learn how to study each type of subject and, indeed, each type of study procedure for different phases of the same subject. In the second place, this book emphasizes the necessity of starting each type of study procedure by first analyzing the process and demonstrating how it works. This is accomplished by means of introductory demonstration exercises which not only give the pupils a pattern to go by, but also analyze the procedure in terms of the principles involved. Each succeeding practice exercise under each type of study should be consciously related to the appropriate guiding principles, until consciousness of the principles is gradually supplanted by habit formation. Finally, the exercises are, in general, arranged on the assumption that with the perfection of each type we are better prepared to take up the next type. This assumption is especially true of the arrangement within each of the eight main divisions. As each easier stage is more or less habituated we can turn most of our conscious attention to the next higher stage. When all of these study procedures are reduced to the habit level, we are then ready to turn most of our attention to the higher types of thinking, while habit takes care of those elementary study pro-

cesses which previously demanded so much of our attention. These study habits are of fundamental importance just because their perfect functioning sets free the mind for the higher types of mental activity. Consciousness still directs, but habit executes, and executes more promptly and more surely.

3. The Supervised Study Problem

Skilful study involves the discriminate selection and organization of the thought related to definite purposes. The type of procedure employed in studying varies not only with the purpose or goal set, but also with the type of subject matter, and with different individuals dealing with identically the same subject matter. Hence, supervised study requires that we acquaint the pupils with the better types of study procedure and give them plenty of practice using these in the various phases of each subject. This necessitates close supervision and guidance by a skilled teacher during the time in which pupils are gradually becoming able to do their own selecting, rejecting, organizing, etc., according to purposes and methods of their own choosing. With this idea in mind, the writer has selected from the great number of study activities those types which are thought to deserve immediate attention in connection with our content courses. It is hoped that the performance of these activities in connection with the regular class work will serve as the means of revealing to both the teacher and the pupils those types of study procedure best adapted to the type of work

being pursued and best fitted to the individual pupils pursuing such work. The suggestions herein offered are in line with present day thought along the various lines concerned; but it is hoped that you will consider them as only "suggestions", which doubtless need some modifying to meet special problems, and certainly need much supplementing through the addition of further exercises along similar lines. The writer feels sure that these practice exercises can be made to contribute very effectively not only to pupil mastery of the subject matter of the content courses, but also to your own personal benefit. All the teachers who have used this outline in its preliminary form have stated that it greatly aided in the two ways mentioned above. The majority of them have also stated that it added interest to the pupils' work.

Supervised study should involve the following cycle of steps at each stage of advancement:

- (1) *Diagnosis*, or preliminary testing and observation to discover deficiencies. If no deficiencies are discovered, we should immediately take up the next higher stage.
- (2) *Removing deficiencies* by applying proper specific methods of teaching.
- (3) *Checking up*, or testing again to discover whether the specific teaching has removed the deficiencies. If the deficiencies have been removed, we are ready to go on; but, if the deficiencies have not been removed, the specific method of teaching should either be changed or applied more intensively.

These exercises have been planned so as to utilize the above cycle of steps. At the beginning of the course you are asked to make certain observations and to give certain standardized tests, in order to discover whether there are deficiencies in rate and comprehension of reading. Then you are asked to put your pupils through certain specific types of training intended to remove such deficiencies as are discovered. At certain other points of the course you are asked to give other forms of the same tests so as to get a measure of the pupils' progress and an idea of the character of the remaining deficiencies. A similar cycle is utilized within the sections of each chapter. Every discovered deficiency should be pursued until eliminated, or at least until a standard appropriate for the grade is reached. This may consume a great deal of time at first; but in the end it should save much time and energy, because time and energy can be spent more economically when these hindering factors are removed.

4. Comprehension in Silent Reading the Prime Requisite in Learning to Study

It has already been indicated above that the reading type of study is of prime importance because it is the means of securing data for most of the other types of study, and also because it is the most frequently used type, especially in connection with the content subjects. It is evident that a very essential part of the material of our content courses lies locked up in books, bulletins, magazines, etc., and it is,

therefore, necessary that the pupils learn to grasp and understand the thought efficiently. The act of grasping and understanding the thought is here called "comprehension", but even when thus simply defined, comprehension remains a very complex process. The suggested types of training are proposed as the means of getting at some of the more important elements of this complex. After giving a few general directions applicable to all the types of training suggested, the writer will list some eight specific types of training in comprehension, and suggest a few types of practice exercises suitable for each. It is urged that you supplement the lists as fully as possible.

5. General Directions

The exercises in each section listed below should be planned and written out in definite form at least a week before you expect to give them in class the first time. State the book, page, and paragraph on which you expect to apply each suggestion and carefully work out the full procedure which you expect to follow. At the end of the first recitation on each section carefully write out a report of the lesson as actually carried out. In this report should be included a statement of all the essential things done, results obtained, deficiencies discovered, plans for following up the training along the lines of discovered weaknesses, and any other facts or comments which you think will contribute to giving efficiency in the type of study activity in question. File your lesson plans and reports until you have finished all

the sections under each chapter. Within three days after you have finished all the sections under each chapter, you should send us copies of your plans and reports for each section of the particular chapter, together with a summary report for the chapter as a whole. For instance, within three days after you have finished all four sections of Chapter III, you should send in a full report on each section and a summary report for all four sections; and similarly for the sections of each of the other chapters. It is suggested that you use carbon paper for making duplicates of your plans and reports. Send two copies, so that one copy may be marked and returned to you and the other filed for our records. In many cases you will find it desirable to vary your recitation somewhat from the previously prepared plans. In such cases indicate the change made and your reason for making the change. Feel free to use your own initiative at all time, but always report all facts which may throw light upon our supervised study problem. So much for the planning and reporting of your first recitation with each suggested type of exercise. Similarly plan and carry out several recitations using the same type of study procedure. Two to four weeks should be devoted to the exercises suggested in each chapter, according to the time distribution suggested below. When you have finished your special drive on each particular type of training, give informal tests and write out a general account of your experiences with the particular type of training. Similarly summarize your experiences with

the exercises of each chapter as a whole. At the end of the course you will be expected to give a critical account of your experiences with each type of exercise used at any time during the entire course. The duplicate lesson plan, the duplicate immediate report on the first recitation, and the final term report will be expected in connection with each type of exercise. Additional special directions will be given in connection with each specific type of exercise. Where there are to be any exceptions to any of the above general directions, such exceptions will be stated in connection with the sections affected.

6. Cautions

These cautions are given before you begin your work, so that you may be warned against certain things which frequently hinder the effectiveness of correspondence work. Strict observance of these cautions will make your work more effective and will avoid the necessity for future criticism along such lines.

In this course we are dealing primarily with the problem of comprehension in silent reading as it is related to study. You are expected to get much more from the course than the pupils do. Therefore, it is of first importance that you thoroughly comprehend the directions. We need not expect to make a great deal of progress in teaching comprehension until we, as teachers, become conscious of the processes involved in comprehending, and make these processes a part

of our own study habits. The manner in which you plan, carry out, and report your work will indicate how well you have mastered the directions and suggestions furnished in this course. As has been stated above, there is no insistence upon rigid conformance to all the suggestions given in this outline; but there is emphatic insistence upon a rigid comprehension of the material of this outline, as the first requirement of the course. Without an adequate study of these directions, you can not hope to plan the exercises adequately nor to carry through the class work successfully. You should carefully note every detail of the outline and study over the meaning and significance of the same, before attempting to carry out the exercises. In most cases it will prove helpful for you to go over each type of training in a preliminary way, trying to put yourself in the place of the pupil. Such a procedure will not only help you to get a better notion of the essential nature of the study process, but it will also enable you to anticipate and prepare for the difficulties which the pupils will probably encounter. In order that your efforts may accomplish the greatest good for yourself and your pupils, you should adopt the following watchwords:

- (1) *Complete comprehension of all directions and discussions.*
- (2) *Thoughtful planning, with attention centered upon the pupils and their needs.*
- (3) *Careful reporting, discussing, criticising, etc., with a view to making these exercises more useful to both teacher and pupils.*

- (4) *Follow-up drill* on each type at every opportunity, until the procedure is habituated.

7. Suggested Time Distribution of the Exercises

The writer thinks it best to start this course of training not earlier than the third week of school, so as to avoid the irregularities incident to getting school organized and started off with the normal work. He also thinks it best to get the special exercises finished before the beginning of the last school month, which is usually crowded full of irregularities incident to the closing of school. With an eight month term these special exercises can be started with the preliminary testing in the third week, and terminated with the final testing in the twenty-eighth week, thus affording six months of training during the least disturbed part of the school year. With a nine month term a little more time can be devoted to the exercises of each chapter. It is suggested that the teacher spend the first two weeks in mastering the discussions and directions in Chapters I and II, and in observing how the pupils study and how well they get along at recitation time. A brief general statement of the findings of this observation is very desirable for use in checking against the results obtained with the standard tests. The last month or six weeks of the term may profitably be devoted to training the pupils in selecting the type of study procedure appropriate for the more important types of study material used in the particular content course. Chapter XII suggests exercises for this purpose.

Where a teacher is not working for credit, but only to improve the study habits of her own pupils, she may distribute the time and emphasis more strictly according to her own teaching problems. Even in such cases, it would seem advisable to take up the exercises somewhat systematically. After a type of study procedure has once been introduced, pupils should be urged to use it in every succeeding situation for which it is appropriate, so that it may become drilled into each pupil's system of study habits. The following is suggested as a tentative distribution of the special drives on the exercises of the various chapters:

Chapter	I studied by the teacher during the first two weeks.
Chapter	II applied during the 3d week.
Chapter	III applied during the 4 and 5th weeks.
Chapter	IV applied during the 6 and 7th weeks.
Chapter	V applied during the 8 and 9th weeks.
Chapter	VI applied during the 10, 11, and 12th weeks.
Chapter	VII applied during the 13, 14, and 15th weeks.
Chapter	VIII applied during the 16, 17, 18, and 19th weeks.
Chapter	IX applied during the 20, 21, 22, 23, and 24th weeks.
Chapter	X applied during the 25, 26, and 27th weeks.
Chapter	XI applied during the 28th week.
Chapter	XII applied during the rest of the year.

It should be borne in mind that the proposed exercises should not be allowed to detract from the

usual progress and purposes of the subject with which they are used. Most of the exercises are to be planned so that they utilize the regular material of the subject and produce greater facility in mastering that material. Though the testing sections do not deal directly with the content of the subject, nevertheless it will be found that they serve as effective stimuli to improvement in the efficiency of the pupils' work. This motivating effect is especially noticeable where pupils keep records of their individual improvements in rate and comprehension.

It is suggested that the teacher at first carry through this training in connection with only one class in one subject. After becoming acquainted with the exercises, the teacher can doubtless use them in connection with more than one subject. The time devoted to the exercises will need to vary with the total time available for the subject. It would seem that these exercises should be used in connection with the equivalent of at least two periods per week. Some teachers many prefer to use a part of each period for the exercises, while others may prefer to devote certain days exclusively to the exercises and the other days exclusively to the usual type of work. The writer prefers the first mentioned plan as the general rule, with and occasional total period devoted sometimes exclusively to the exercises, and sometimes exclusively to other types of work, according as the teacher judges best. The principles of Educational Psychology indicate that the best results can be secured in connection with habit formation when the

particular habit is caused to function regularly at every opportunity. Therefore, it seems advisable to keep constantly at each type of exercise until pupils gain at least some facility in its use. This requires daily use of each specific type of exercise while it is the main problem on which we are driving, and also the occasional repetition of the exercise even after the main drive has been shifted to other specific exercises. Only by such a plan can we hope to establish and maintain efficient habits of study. The directions lay special emphasis upon the first recitation with each type of exercise, but it is evident that abundant follow-up drill must be afforded in succeeding recitations. At the first of the course the exercises may seem to take more time than they deserve, but there is bound to be a large saving of time in the long run, as the training begins to give a better rate of reading combined with more efficient comprehension of the material read. The standard test results obtained in connection with the preliminary use of these exercises in the vocational schools showed, in general, good gains in both speed and comprehension, with large gains in one or both functions in the case of certain schools. The teachers indicated that, in their own judgment, the exercises had added to both the interest and the effectiveness of their pupils' work.

8. Studying and Reciting

To the writer there seems to be no justification for sharply differentiating "recitation" and "study"

periods for pupils who are just learning how to study, especially where they are under the same teacher during both periods. To him "studying" and "reciting" seem to be part and parcel of one total learning process—selecting and understanding the thought, organizing ideas, and impressing them on the nervous system so that recall is assured. To him it seems that at least the early stages of supervised study demand an intermixture of studying and reciting, so that the one constantly supplements the other. Why do pupils study, if it is not to get the material for the recitation, and the material found lacking during the recitation? Why do they recite, if it is not to show wherein studying has succeeded and wherein it has failed to give an essential mastery of the prescribed work? It is evident that the movement for the stricter supervision of study is largely an attempt to connect properly the needs and problems arising during the recitation with the needs and problems arising during the study period. In accordance with this conception, the writer has frequently suggested that the teacher call for reciting during the study period, and for studying during the recitation period. Consequently, such expressions as "at the recitation time" and "during the study period", as used in this book, frequently describe only the predominant type of situation. "At class time" refers to the particular time division usually set apart for the class meeting, regardless of the type of work done at such periods. "At the laboratory period" refers to the period in which the study

involves the acquisition of knowledge primarily through experiments and directed observations, rather than through the study of printed matter.

References

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Discusses **importance of study**, kinds of study, how to study, etc.
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Discuss **methods of securing practice**.
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PART I

GENERAL PROBLEM OF RAPID THOUGHT GETTING

CHAPTER II

PRELIMINARY TESTING OF SPEED AND COM- PREHENSION FOR DIAGNOSIS AND MOTIVATION

Main Points of the Chapter

1. The teacher's first problem is to **diagnose** the abilities of her pupils, in order to find out where to direct remedial teaching.

2. Next, she must **motivate** the work by setting an ultimate goal and by furnishing standards by which the pupils can measure their own accomplishments as they try to improve.

3. Diagnosis and motivation can be greatly facilitated by giving the following three types of **preliminary tests**:

- (1) Test of **comprehension**, unhampered by time limitations.
- (2) Test of **combined rate and comprehension**.
- (3) Test of **rate alone**.

4. **Planning this lesson** involves becoming thoroughly familiar with the tests and the directions for using them.

5. The **report** should show tabulated results for the class, and should also give an explanatory discussion of special cases.

1. Diagnosis

Before taking up any special line of training, it is necessary to ascertain where the pupils stand in relation to the skill in question. The general problem of giving training in rapid thought getting will be attacked first, but before starting the training you should test your pupils to find their standing in the two most prominent constituents in rapid thought getting, namely, rate of reading and efficiency of comprehension. Training should be directed toward the overcoming of weaknesses or deficiencies. This preliminary testing will show what pupils are weak and where they are weak. You must then center your greatest efforts upon remedying these discovered points of weakness.

2. Motivation

Not only can we use this preliminary testing as the means of discovering points of weakness needing attention, but we can also use it as the basis for motivating the training exercises which follow. Many pupils do not realize that they read too slowly, or that they are poor in comprehension. This testing furnishes objective proof which is convincing. Such proof will spur many pupils to determined effort to improve, especially where there is held out an opportunity to get special help in overcoming the discovered deficiencies. The tests will also furnish the pupils with standards by which they can check their accomplishments as they struggle to improve, and with objective ultimate standards toward which they

should develop. These benefits will be greatly increased if the pupils are taught to keep a weekly record of their development in rate and comprehension. Such a record, kept by each individual, should show the individual's score, the class norm, and the corresponding grade norm. At the end of each week the individual pupils should take stock and set a higher standard as the goal for the next week. The use of graphs similar to those suggested on the Thorndike-McCall graph sheet will prove stimulating. There should also be one summary record and graph sheet kept for the class as a whole. It should be kept posted where pupils can have easy access to it. After a few weeks of intensive training with each specific type of training, the records and graphs for that type might well be recorded on a two weeks basis, and still later on a monthly basis. Pupils can easily devise tests for rate of reading, but the teacher will have to aid them in devising informal comprehension tests modeled after the Thorndike-McCall tests or the Monroe tests. For the preliminary testing three standardized silent reading tests should be given as indicated in the directions given below.

3. Preliminary Testing

(1) *Thorndike-McCall Reading Scale.* For giving this test the following three kinds of materials are needed: ¹(a) Thorndike-McCall Reading Scale, Form 4 (One copy for each pupil); (b) Tabulation

¹ Published by the Bureau of Publications, Teachers College, Columbia University, New York.

and Graph Sheets, Form 4 (Two or more copies for each class); (c) Directions Sheets, Form 4 (One copy for the teacher). Give the test *exactly according to the directions* printed on the Reading Scale. You should note that this is a *comprehension test* in which the pupils are allowed to re-read as often as they wish. Study the test materials and directions carefully. Go through the motions of giving the test to an imaginary class until you become thoroughly familiar with the procedure. Then give it to your class, following directions exactly. For this test we are interested in only the "T Score", which can be computed from Table I on the Directions Sheets. Note that the grade norms are given in Table II of the same page.

(2) *Monroe's Standardized Silent Reading Test.* For giving this test the following two kinds of materials are needed: ¹(a) Monroe's Standardized Silent Reading Test, Revised, Test 2, Form 1 (One copy for each pupil); and (b) Class Record Sheet, Form 1 (Two or more copies for each class). Give the test, *following directions exactly*. Note that this test measures both *rate and comprehension*. The directions for giving and scoring the test are printed on the back of the Class Record Sheet.

(3) *Courtis Silent Reading Test.* For giving this test the following five kinds of materials are needed: ²(a) Courtis Silent Reading Test No. 2, Form 3 (One

¹ Published by Public School Publishing Co., Bloomington, Illinois.

² Issued by S. A. Courties, 246 Eliot Street, Detroit, Mich.

copy for each pupil); (b) Individual Record slips to match (One for each pupil); (c) Duplicate Class Record Sheet to match (One or more for each class); (d) Curtis Folder B-R (One for the teacher); and (e) Curtis Folder D-R (One for the teacher). Folders B-R and D-R can be used again in each succeeding Curtis test. First *give Part I exactly according to the printed instructions*, but *do not give Part II according to the Curtis plan*. *Modify Part II as follows*:—As soon as the pupils have finished Part I, collect the test folders and give each pupil a clean sheet of paper. Then read aloud each of the seventy questions listed under Part II, and have each pupil to put the answer “Yes”, or “No”, for each question. They should merely record each answer opposite the appropriate question. To illustrate, the pupils’ answers for the first three questions would be recorded as follows: 1...Yes; 2...No; 3...Yes; etc., arranged in vertical columns so as to facilitate checking.

Do *not* compare the comprehension results obtained in this way with those obtained by using the original Curtis plan. There is no comprehension norm for this modified method, but the results show the relative standing of the individual pupils in your class. Do not lay much stress on the results obtained by answering the questions, for memory enters as a large element here. The plan is suggested only as a means of “keeping faith” with the statement in Part I: “You will be asked to answer questions about what you have read.” It is *important* that you observe this

changed method, for when the test is given according to the Curtis method some pupils discover that they will get a chance to re-read the material in the little sections before answering the questions in Part II. This spoils the results of Part I in all later testing. Alert pupils may skim rapidly with little attention to the thought since they know that they will have another chance to read for thought in connection with Part II, as given by the original Curtis plan. In the giving of this test we are interested in rate only, but we want the rate which pupils employ when they *expect* to have to answer *questions* on the material read. The above change in the method of giving Part II is made in order to make sure that the pupils read for thought as well as for rate. This modification is necessary because there are no standardized tests exactly suited for finding the rate at which pupils read for thought. Most of the tests consume some of the pupils' time in answering questions along with the reading, so that pure rate is not measured.

4. Lesson Plan

You do not need to prepare a lesson plan for this testing, but you should become thoroughly familiar with the tests and directions before attempting to do the testing.

5. Report on Testing

Compute the scores, by grades, for each of the three tests, and record the scores on the appropriate score sheets. Send us duplicate copies of the score

sheets, but keep the test sheets on file for purposes of study and comparison. Do *not* leave the test sheets in the possession of the pupils after the testing is finished. At the end of the course you will be expected to send us the pupils' test sheets for our study. The scores of the class should be prominently posted, with the names of the pupils omitted; but each individual pupil should be told *his* score. *Note* that in the listed Monroe test, 29 is to be added to the rate score, and 5 to the comprehension score to make the results comparable with the norms on test I. On each Monroe Test folder fill in all the score blanks at the upper right hand corner of the first page. Compute only the average T-score for the Thorndike-McCall tests, and only the rate median for the Courtis tests. The test folders contain directions for computing the median.

In addition to the test scores, send us a full written report of the testing and the facts which the testing brought out. See General Directions in Chapter I, for instructions for reporting. Note to what extent the testing results agree or disagree with your own personal estimate of the standing of individual pupils, and try to explain the cases where there is marked disagreement. Any irregularities in giving the tests should be stated in your report.

References

1. Monroe, W. S. *Measuring the Results of Teaching*, 1918, pp. 22-29, and 43-86. (Use of reading tests for measurement and diagnosis).

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2. Wilson, G. M. and Hoke, K. J. **How to Measure**, 1920, pp. 111-133. (Measuring reading).
 3. McCall William A. **How to Measure in Education**, 1921, pp. 3-18 (Place of measurement in Education); pp. 67-102 (Diagnosis).
 4. Stone, Clarence R. **Silent and Oral Reading**, 1922, Chapter IX (Reading tests and their use in improving reading).

CHAPTER III

TRAINING TO INCREASE THE VISUAL SPAN AND THE SPEED WITH WHICH PUPILS "SEE" WORDS

Main Points of the Chapter

1. Defective eye movement in silent reading should be overcome by means of the following remedial training:

(1) Showing each pupil his standing in rate of reading, and appealing to him to strive to reach progressively higher standards.

(2) Using **brief exposure methods** for demonstration and practice.

(3) Practicing on exercises consciously directed toward **increasing silent reading rate** without loss in efficiency of comprehension.

2. At the end of the special drive on rate a second form of the Courtis test should be given for further **checking up, diagnosis, and motivation.**

1. Introductory Discussion

Experimental investigations of reading have shown that word reading and excessive regressive movements of the eyes are distinguishing characteristics of the immature reader. On the other hand, the mature reader proceeds by word groups (thought units) and seldom allows the eyes to move back and retrace (regress) words or phrases. Our problem here is first to discover the existing deficiencies in

these respects, and then to provide the kind of training which will increase the visual span. The practice exercises listed below are expected to increase the visual span. The net result of this kind of practice should be an increased rate of reading accompanied by a higher degree of comprehension. Comprehension is increased because of the fact that the elements of the thought units are taken into the mind more nearly simultaneously, and hence the processes of association are given a better chance to function in selecting, organizing, and impressing the essential thought elements. Throughout the exercises of this chapter you should use *material* which is *comparatively easy* from the standpoint of comprehension, that is, paragraphs and sentences composed of familiar words and familiar thought, yet taken from selections which the pupils have not previously studied. Then the selections of equal length will furnish only one main variable, that is, increasing rate, while those of increasing length will have length as the main variable, with time held fairly constant. The rate can be more accurately checked up in the exercises suggested under section (3) below, where rate is computed in terms of the number of words read per minute.

(1) Diagnosis and Motivation

Using the rate results obtained with the Courtis test, show each pupil just where he stands in relation to the test norms (grade medians printed on the Courtis Class Record Sheet), and in relation to the

median of his own class. Tabulate the results on the board, as shown in Courtis Table I. Next tell each pupil *his* score and impress upon his mind the extent of his deficiency in rate of reading. Then appeal to him to work for better speed through practice on the exercises suggested below.

(2) Use of Brief Exposure Methods for Demonstration and Practice

Those pupils who are *markedly* slow in silent reading should be given individual practice in reading briefly exposed phrases and sentences. Start with short phrases or sentences and use increasingly longer units as fast as each pupil develops the ability to grasp longer units quickly. Select several phrases or sentences of each length, so as to afford considerable drill material at each stage of development. The following are illustrations of the various lengths of units used in the Vocational Agriculture classes:

Use only healthy cows.

The Kerry cattle are native of Ireland.

Cold rains and snow storms are especially to be avoided.

Three inches of concrete on solid ground will answer all purposes.

Until recent years cream has been secured entirely by allowing it to rise to the top of the milk.

When selling butter fat, cream, or butter, the total quantity of fat and not the percentage of fat is the important point.

There are no mixtures better than the buyer can make himself, and there is no special feed or mixture having any remarkable properties not possessed by familiar feeds.

The above sentences were selected from agricultural books and are offered as suggestions only. Sentences of similar length may be selected from any of the content subjects. For this brief exposure work you may use phrases or sentences typewritten on stiff cards, cut out sentences pasted on cards, or any other device whereby the sentences may be "flashed" (held in view of the pupil for a very *brief* time). Probably this flash work will have to be handled as an individual matter in order to get the best results. After a brief exposure of each sentence, have the pupil to tell what he read. Then give him plenty of time to read and correct his perception. Use the other sentences of the same length for drill, and try to get the pupil to increase his rate of taking in the sentences. Follow a similar procedure with each of the other sets of sentences. Shorten the length of exposure as fast as the pupil gains in ability to grasp the words quickly.

The purpose of this rapid flash work is to increase the number of words which the pupil takes in at each eye fixation, and thereby to decrease the number of eye movements necessary for each line of print. We, as teachers, must first demonstrate to the individual pupil the fact that he can increase his visual span and speed of seeing words, and then we must encourage him to practice on longer and longer

units, or on units of equal length but exposed a shorter and shorter length of time. In the brief exposure exercises we need not expect to get an accurate measure of the time element, but we can easily detect the presence or absence of a gain. The following section continues this training in connection with long paragraphs where the checking can be more exact.

**(3) Practice Exercises in Silent Reading Consciously
Directed Toward Increasing Rate, but Accom-
panied by Special Precautions for Avoid-
ing Serious Loss in Comprehension**

This type of exercise differs from the preceding type only in the fact that here very much longer units are used and comprehension is more accurately checked up. Here the page, or long paragraph, is taken as the unit, and rate is computed in terms of words read per minute, as in the Courtis test. In section (1) above, you have shown each pupil his rate score as measured by the Courtis test. Now urge each pupil to try to increase his rate through drill on the exercises which follow.

In planning this type of exercise select, from the regular textbook or from related material, several pages of approximately equal length and difficulty. At class time have each pupil to read each selection as rapidly as he can to get the thought. Have him to compute his reading rate in words per minute, and with each successive selection urge him to try to increase his rate. Compare rates attained with those

obtained with the standard tests, and frequently measure comprehension by requiring the pupil to write out what he has read, or by having him to write out answers to questions on the pages read. Insist that the pupil always read for thought as well as for rate. This type of study activity can be made a part of your regular lesson getting in connection with relatively easy materials. For checking up comprehension, devise questions similar to those used in the Monroe and Courtis tests. The pupils can easily estimate the rate in terms of words read per minute, if you will show them how to keep time and how to compute the rate. After your first lesson of this type, urge slow pupils to select uniform material and compete with their own individual records. Occasionally check up to see whether they are getting a better rate at the expense of serious loss in comprehension. Give them to understand that comprehension must be kept up. If comprehension begins to drop off seriously, more emphasis should be turned to the comprehension side of study, as habits of careless reading are not to be encouraged. Training which emphasizes comprehension will be taken up in the next chapter. In this chapter we have tried to secure a better visual span and greater speed in seeing unified groups of words, as the mechanical prerequisite to effective training in rapid selecting, organizing, and impressing of thought giving elements.

2. Checking up Results

Throughout this chapter you have been urged to do more or less checking up results through the use

of improvised tests. At the end of this intensive drive on rate, it is suggested that you give another form of the Courtis test and take stock of the gains made in rate of reading. For giving this test you will need three kinds of materials as follows:—(a) Courtis Silent Reading Test No. 2, Form 1 (One copy for each pupil); (b) Individual Record slips to match (One slip for each pupil); and (c) Duplicate Class Record Sheet to match (One or more for each class). The two direction folders listed for the preliminary Courtis test are also used here.

Compute the scores and record them on the term record which you are keeping. Appeal to the pupils to practice enough to maintain the higher rate gained. Otherwise there will be a strong tendency for rate to drop off while attention is being centered on comprehension in connection with the training proposed in the following chapters. Send us the same type of report as suggested for the preliminary tests in Chapter II. Also send a written report as suggested under General Directions in Chapter I.

References

1. Huey, E. B. **Psychology and Pedagogy of Reading**, 1908, Chapter IX, especially pp. 176-81 (Eye movement and rapid reading).
2. Stone, Clarence R. **Silent and Oral Reading**, 1921, pp. 6-19, (Studies of eye movements).
3. O'Brien, J. A. **Silent Reading**, 1921, pp. 126-32; 141-48; 269 (Training in perception).

CHAPTER IV

TRAINING IN GETTING THOUGHT RAPIDLY

Main Points of the Chapter

1. Ability to get the thought thoroughly while reading rapidly may be developed through the use of the following types of training:

(1) Showing each pupil his standing in rate of thought getting, and appealing to him to strive to reach progressively higher standards.

(2) Using class competition to see who can most quickly get the main thought of selected sentences and paragraphs.

2. At the end of the intensive drive on rapid thought getting a second form of the Monroe test should be given for further **checking up, diagnosis, and motivation.**

3. **Summary** of Chapters II, III, and IV.

1. Introductory Discussion

So far rapid reading has been emphasized, but it is evident that the most skilful reading is possible only when rapid reading is combined with rapid thought getting. Therefore, the habit of getting the thought thoroughly while reading rapidly must be developed. This can be accomplished by concentrating upon the thought side of the reading while maintaining a good rate. With a good rate somewhat established as a habit, the attention can be turned mostly to comprehension while rate is maintained largely through habit. In theory, each increase in rate should be quickly followed by catching-up exercises in

thought getting, or vice versa, so that the two processes develop together, as nearly as possible. Most pupils, and many teachers, hold to the false notion that rapid reading is incompatible with efficient thought getting. That theory has been discredited by two groups of facts brought out in connection with various scientific studies of reading. In the first place, it has been found that rapid readers, as a rule, rank high in thought getting, while slow readers, as a rule, rank low. In the second place, it has been demonstrated that, with properly guided practice, the rate can be greatly increased not only without loss in comprehension, but, indeed, with a good gain in comprehension. Our preliminary use of these exercises in the Vocational departments has given good results in both rate and comprehension..

(1) Diagnosis and Motivation

Using the comprehension results obtained with the Monroe test, show each pupil just where he stands in relation to the test norms and the median of his own class. Tabulate the results on the board and tell each pupil his score. After pointing out the amount of deficiency to each pupil, appeal to the individual pupils to work for better comprehension through practice on the exercises suggested below.

(2) Practice Exercises for Increasing the Rapidity of Thought Getting

Pupils should compete with classmates and with their own past performance in an effort to increase the rapidity with which they can get the thought of

printed matter. Class exercises with emphasis upon quickly getting the main thought of selected sentences and paragraphs are useful for this type of training.

In planning exercises for this type of training select a group of short sentences, a group of sentences of medium length, a group of sentences of considerable length, and a group of sentences of extreme length. Likewise select groups of paragraphs of about four different lengths. At first avoid difficult reading matter.

At class time let pupils compete to see who can most quickly get the main thought of each selected sentence and paragraph. This kind of exercise can serve each of the four purposes of diagnosis, motivation, practice, and checking. Pupils who are exceptionally slow should be given additional individual drill during the study period. Always let the drill and exercises be upon essential content material, so that the pupils will be getting useful content at the same time that they are getting training in comprehension. After you have used up the selected sentences and paragraphs, take up consecutive paragraphs in your regular lesson and see how quickly the pupils can get the main thought of each. Do not leave a paragraph until all the pupils have found and understood the essential points. A great variety of methods may be used for checking up results in connection with the training here suggested. The methods might well be varied for different recitation periods. The exercises on the selected sentences and paragraphs may be checked up by having each

pupil to close his book and raise his hand when he thinks he has gotten the thought, so that you may note the time taken. Have him to write out the thought immediately and hand it to you for checking as to accuracy. For the drill on the consecutive paragraphs in your textbook it might sometimes be well to check by calling upon various individuals to give the points orally. After one pupil has recited on a paragraph this oral method ceases to be a good test for that paragraph, so as soon as one pupil has recited his recitation should be corrected and the class should then quickly pass to the next paragraph. Direct a different pupil to do the first reciting on each succeeding paragraph. As suggested above, have each pupil to close his book and raise his hand, so that you can record the time taken. Allow no further consultation of the books until one pupil has recited. Then open the books and correct the thought before passing to the next paragraph. Occasionally skip a paragraph in order to counteract the tendency to read ahead.

In addition to the above checking-up plan, some teachers may desire to use questions for checking up the thought secured in connection with some of the sentences and paragraphs. Questions like those of the Monroe, Courtis, or Thorndike-McCall tests may be formulated in connection with some of the selected sentences and paragraphs. These questions should not be presented to the pupils until they have finished reading the corresponding selection. The order of procedure should be as follows: First read the

paragraphs and close the book. Then immediately read the question and write the answer. The timing and checking can be handled in the following manner: Write each question on the board and cover it with a map until the class has started to reading, when the map can be removed. Start the pupils to reading simultaneously, by signal, and instruct them not to look up until they have finished reading and have closed their books. As soon as each pupil has finished, have him to read the question and write the answer. As each pupil closes his book write down his name. The order of the names thus recorded will show the relative rate of reading. For the longer paragraphs you may be able to record the actual time. However, the relative time taken will probably be sufficient for our purpose in this connection. Pupils should be shown how to check up rate and comprehension in this kind of exercises, and then they should be urged to carry out much individual practice of the kind here suggested.

2. Checking up Results

Throughout this chapter you have been urged to do more or less checking up through the use of improvised tests. Now, at the end of the intensive drive on rapid thought getting, you should give another form of the Monroe test and take stock of the progress made. For giving this test you will need two kinds of materials, as follows: (a) Monroe's Standardized Silent Reading Test, Revised, Test 2, Form 2 (One copy for each pupil); and (b) Class Record Sheets to match (Two or more for each class).

Compute the scores and record them on the term record which you are keeping. Show the class and each individual pupil just what progress has been made, and appeal to them to keep up the standard attained. Send us the same type of report as that suggested for the preliminary testing in Chapter II. Also send a written report as suggested under General Directions in Chapter I.

3. Summary

At this point let us take our bearings: Through preliminary testing we first discovered where our pupils stood in terms of rate and comprehension. Then we attacked the general problem of increasing the rate at which pupils read for thought. Using the training suggested in Chapter III, we endeavored to increase the rate at which pupils perform the mechanical side of silent reading. Using the training suggested in Chapter IV, we continued our drive on the rate problem by laying special emphasis upon getting the thought rapidly. This completes our special intensive drive on the general problem of rapid thought getting. In the chapters of Part II we shall take up certain specific problems in comprehension.

References

1. See references in Chapter III, especially Stone, pp. 16-19, (Rate and comprehension).
2. Judd, C. H. **Measuring the Work of the Public Schools**, Cleveland Educational Survey, Cleveland Foundation, p. 155 ff. (Quality and rapid reading).
3. O'Brien, J. A. **Silent Reading**, 1921, pp. 270-73 (speed in reading).

PART II

SPECIFIC PROBLEMS IN COMPREHENSION

CHAPTER V

TRAINING TO CONCENTRATE UPON THE READING MATTER IN HAND.

Main Points of the Chapter

1. Habits of concentrating quickly and fully along specific lines can be encouraged through the use of the following types of training:

(1) Demonstrating to each pupil his weaknesses in concentration, and then appealing for greater effort at overcoming the discovered deficiencies.

(2) Practicing getting into the reading matter quickly.

(3) Practicing finding the first relevant ~~thought~~ quickly.

(4) Practicing recalling the problem often while reading for its solution.

(5) Following a systematic study schedule.

1. Introductory Discussion

The mind which quickly and fully shuts out foreign thoughts, stimuli, etc., and concentrates quickly, completely, and continuously upon the problem in hand, can be expected to get maximum results in terms of selecting, organizing, and impressing the es-

sential thought of the matter studied. This chapter will suggest exercises intended to demonstrate the advantage of quickly and fully concentrating upon the problem in hand. The next chapter will propose training for developing power to maintain a long span of attention.

Ability to concentrate quickly and fully along specific lines is expedited by a clear-cut statement of the problem or questions under consideration. This aid will be utilized in the exercises suggested below. Again, the habit of quickly getting down to business must be established through constant insistence upon such promptness, and through constant discouragement of the tendency to "fuss about" a while before getting down to work. We must give pupils to understand that no lolling is to be tolerated, and we must also place a premium upon getting results quickly.

(1) Diagnosis, Motivation, Checking, etc.

Each of the several types of exercises suggested below can be used for purposes of diagnosis, motivation, practice, and checking up, in connection with the training for quick concentration.

(2) Practice Exercises in Quickly Concentrating

Pick out four or five appropriate paragraphs to be studied during the supervised study period. At study time tell the class that you have selected some paragraphs which you want them to read quickly for the main thought. State one of the paragraph headings and allow the pupils plenty of time to get the topic clearly in mind and to call up related ideas.

Then, without further warning, direct the pupils to read the selected paragraph. At the end of *ten seconds* call a halt and have each pupil to underscore the word he is reading. Then have the pupils to close their books and write out what they have read. In your first trial you may find that many of the pupils do not get started to reading in ten seconds, but such exercises should soon put most of the pupils on the alert, so that they will read several lines in the first ten seconds. Do not consume much time on the written material, for the writing is suggested only as the means of keeping some pupils from fudging or doing a superficial type of reading. A few preliminary observations will reveal the fact that pupils frequently "waste" several minutes before they really get into newly assigned tasks. Such waste is not only unnecessary, but also has a deteriorating effect upon the pupils' work. Repeat this type of exercise frequently, until pupils are brought to the point where they "pitch right into" the work without appreciable loss of time.

(3) Practice Exercises in Quickly Finding the First Statement Relevant to a Given Problem or Question

For this type of exercise select four or five suitable paragraphs and formulate an appropriate question or problem related to each. In your plans indicate the first relevant statement and where it is found in the paragraph. At class time, first write each question on the board. Next point out the ap-

appropriate paragraph, by indicating the page and line, and then have the pupils to see how quickly they can find the *first relevant statement*. As soon as each pupil finds the statement have him to underscore the first word, close his book, and raise his writing hand. Check up the reading by going about and observing what each pupil chooses as the first relevant statement. Consider the time each pupil takes in relation to his normal reading rate. Failure to note the first relevant statement will indicate either a lack of concentration upon the question, or the presence of superficial reading. As soon as you have checked up each pupil's reading, direct him to finish the paragraph. Finally, have the class to discuss the paragraph as a unified whole, before going on to the next selected paragraph.

(4) Practice Exercises in Recalling the Problem Often While Reading for Its Solution

Material can be selected discriminately and organized appropriately only when the reader clearly and constantly holds in mind the purpose for which he is reading. Unless pupils are frequently reminded of the immediate goal toward which they are working, they may wander from the main purpose of the study and be confused. To avoid such confusion, you should frequently have them to state what they are looking for, or the problem which they are hoping to solve through studying the particular reading matter. Such occasional stating of the question or problem

keeps the guiding purpose predominant and thus aids in the selection of ideas.

For these exercises select a few paragraphs and formulate an appropriate question based on each. At class time, first clearly state the question on one of the selected paragraphs, and then direct the pupils to read the paragraph for the answer to the question. After the reading has proceeded for a while, ask the pupils to re-state (in writing) the question for which they are seeking an answer. Sometimes allow them to state the question orally. Failure to re-state the question approximately, indicates a lack of concentration upon the problem. Repeat this type of exercise as frequently as necessary in order to keep the pupils aware of the necessity of holding in mind the specific question or problem on which they are studying. Without such sustained concentration, selective reading on a large scale is impossible.

A variation of the above type of exercises involves writing out the question on the board and directing the attention of individual pupils to the question whenever they seem to be losing sight of the problem. Plan a few exercises of this type and direct the attention of individual pupils to the written questions as often as it seems necessary. When a pupil gives an irrelevant answer, it is time to use one of the above methods to direct his attention to the importance of the question. Even when the class is not reciting upon the paragraphs being studied, it is well to check occasionally in order to find out

whether they are concentrating upon the problems assigned them.

(5) Partly an Outcome of Habits of Discipline and Orderliness

Pupils who have learned to "work while they work", to go about their work systematically at the proper time and in the appropriate way, have built up habits which will serve as powerful aids to specific concentration. See that your pupils constantly observe these essentials, and see that unnecessary or unusual distractions are not allowed to interfere with their work during the study period. Absolute quiet is not desirable, but unusual distractions should be eliminated.

References

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2. Starch, D. **Educational Psychology**, 1919, pp. 180-83, (Control of Attention).
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CHAPTER VI

TRAINING IN MAINTAINING A LONG "SPAN" OF ATTENTION

Main Points of the Chapter

1. Skill in holding in mind the points which are relevant to a given problem may be developed through the use of the following types of training:

(1) **Showing** each pupil his **deficiencies** in each of the exercises suggested below, and then appealing to him to strive to reach progressively higher standards.

(2) Giving the pupils **directed practice** in **recalling** the **points** of successively longer selections.

(3) Giving the pupils **directed practice** in **holding** some relevant **points in mind** while searching for additional relevant points.

(4) Giving the pupils **directed practice** in **selecting and holding in mind relevant points**, under a **time limit**.

2. Giving a second form of the **Thorndike-McCall** test for **checking up** and **motivation**.

3. **Summary** of Chapters V and VI.

1. Introductory Discussion

In connection with the training suggested in Chapter IV, it was maintained that rapid reading is essential because it brings all the various elements of each thought unit into the mind more nearly simultaneously and thus aids comprehension. This chapter will suggest further methods of accomplishing the same result. It will suggest exercises intended to in-

crease the "span" of attention, that is, to increase the length of time that the pupil can hold in mind relevant thought elements, and to increase his ability to hold some relevant thoughts (points) in mind while searching for additional relevant points. It is evident that this type of training involves memory as well as attention. As has been suggested above, adequate comprehension is possible only when all the essential thought elements are brought together and blended. It appears that both rapid reading and a long "span" of selective attention are necessary for this convergence and blending of thought elements.

(1) Diagnosis, Motivation, etc.

Each of the several types of exercises suggested below can be used for diagnosing the deficiencies along the line of the habits involved, for motivating the drill which follows in each group of exercises, and for checking up accomplishments in each line of training. As in the preceding chapter, there are no standardized tests specifically adapted for testing the skills here involved.

(2) Practice Exercises in Recalling the Points (Thought Elements) of Longer and Longer Sentences and Paragraphs

Here the emphasis is upon *holding in mind* the points gathered through reading. The recalling of the points furnishes evidence that the points are held in mind, and at the same time constitutes a type of exercise which is very helpful for stimulating the

efficient selection and retention of essential thought elements.

In planning these exercises list a few sentences that are short and simple, a few that are a little longer, and so on until you have listed five or six groups of sentences ranging from short sentences to very long ones. Similarly list groups of paragraphs ranging from short paragraphs of three or four simple statements to paragraphs of the greatest length commonly found in your textbook. Do not use complicated materials, but only such as are relatively simple in construction and familiar in content.

At class time explain the game to the class, and then, starting with one of the shorter sentences, first have the pupils to read the sentence once, and then have them to close their books and write out the points from memory. Check up their reading by having different pupils to read their list of points aloud, by having various pupils to write the points on the board, or by passing around and inspecting pupils' work. After they have written out all they can, they should carefully correct their list by consulting the sentence in the book. Go through a similar procedure with each of the selected sentences and paragraphs, and constantly emphasize the necessity of holding the essential points in mind. With the extremely long paragraphs it may prove necessary to allow some of the pupils to glance through each paragraph after reading it over once.

The first attempt at this type of exercise may not show a great deal of proficiency on the part of

the pupils, but the exercises should make both the teacher and the pupils aware of the need for training in this essential phase of study. It seems that such a type of procedure could profitably be used quite often in connection with the preparation of the regular lessons. After the first introductory lesson on this type of exercise you would not need to take so much care to select sentences of various lengths; but you could take up the sentences as they come, especially those of sufficient length to give trouble to most of the pupils. Plan to keep constantly at this problem of increasing the span of attention, and encourage individual pupils to do much practicing of this type while preparing regular lessons.

**(3) Practice Exercises in Selecting Relevant Points
and Holding Such Points in Mind While
Reading for Further Relevant Points**

The main purpose of this type of exercise is to develop proficiency in selecting and holding in mind relevant points while searching for succeeding points related to the same stated question or problem. Searching for the solution of a definite problem, or for the answer to a thought question requires this type of activity. Hence the great need for developing proficiency in selecting and holding in mind the successive points under a topic.

In planning exercises for this type of training pick out simple paragraphs ranging from those of a few statements (points) relating to a definite topic, to those of many statements relating to some definite

topic. For each paragraph frame an appropriate question calling for the main statements relating to the central topic of the paragraph.

At class time write on the board the question to be used in connection with each paragraph, and then require the pupils to read the paragraph for the answer to the question. After they have devoted plenty of time to the reading have them to close their books and write out the answer to the question. In this practice do not allow them to mark the points or to write down the points while reading, for in the exercises of this chapter the problem is to develop the habit of "holding points in mind". After all of the pupils have finished writing on each question, have them to open their books and, under your supervision, carefully take down and review the essential points. Occasionally this corrected list of points should be written on the board as the pupils suggest the points. In the exercises of this section allow plenty of time for the reading. In section (4) exercises will be suggested for speeding up the rate at which this type of thing is done; but in the exercises of the present section the emphasis should be centered upon developing the habit of "holding points in mind" when the rate factor is not stressed.

(4) Practice Exercises in Selecting and Holding in Mind Relevant Points, under a Time Limit

These exercises are carried out in the same general way as those suggested under section (3) above, except that we here emphasize increasing the speed

at which the activity is performed. Use groups of paragraphs similar to those used in section (3), but gradually shorten the time allowed for finding the relevant points. Use new reading matter (not previously studied) for this purpose and finally insist upon getting the main points at a single reading.

2. Thorndike-McCall Test for Checking up and Motivation

At this point give another form of the Thorndike-McCall test, to find out what has happened in the comprehension phase of reading, and also to furnish the motive for attacking the specific phases of comprehension in connection with the exercises to be suggested in the following chapters. For giving this test the following materials are needed:—(a) Thorndike-McCall Reading Scale, Form 2 (One copy for each pupil); (b) Tabulation and Graph Sheets, Form 2 (Two or more copies for each class); and (c) Directions Sheet to match (One copy for the teacher).

Compute the scores, and record and report them as with the Monroe test in Chapter IV.

3. Summary

In the exercises suggested in Chapters V and VI an effort has been made to develop control of attention as one of the specific problems connected with the development of a high grade of comprehension. In the exercises suggested in Chapter V, an effort was made to develop the power to direct attention selectively, and the power to maintain sustained attention,

while in the exercises suggested in Chapter VI, an effort was made to increase the span and intensity of attention.

References

See references in Chapter V.

CHAPTER VII

TRAINING IN "VISUALIZING" THE DETAILS OF WHAT IS READ

Main Points of the Chapter

1. Pupils should be trained to **interpret** difficult reading matter by **relating** it to their own **accumulated fund of experiences**. Such training may be given through the use of the following exercises:

(1) **Diagnosis** of **pupil difficulties** through the use of improvised tests, and **demonstration** of the proper use of related past experience as an aid to meaning-getting.

(2) Exercises in **describing** the "**pictures**", **places**, etc., **which come to mind** as the pupil reads selected passages.

(3) Exercises in **making charts, drawings**, etc., to **represent the thought** of printed matter.

(4) Exercises in **identifying** reading **content** with **concrete personal experiences**.

(5) Exercises using **ready-made pictures, slides**, etc., to **clarify or supplement** printed discussions.

1. Introductory Discussion

Very often pupils do not comprehend the full significance of reading matter on account of the inadequate functioning of the appropriate related experiences. To stimulate the adequate functioning of the apperceptive process in connection with comprehension in reading and study, the teacher must give

the pupils much practice in recalling experiences closely related to the study material. Such past experiences, sometimes consciously recalled but often unconsciously operating, are absolutely necessary for the comprehension of meaning. These past experiences need not be limited to the real personal experiences of the pupils, but may range from the intensely vivid personal experience to the "second-hand" experiences gathered from books, stories, pictures, etc. The purpose of the exercises suggested in this chapter is to get the pupils to form the habit of interpreting difficult reading matter by relating it to their accumulated fund of experiences. This kind of activity not only builds up the meaning in the immediate situation, but also tends to make the acquisition a permanent part of the pupils.

(1) Diagnosis and Demonstration

As in previous sections, the first trial of each type of exercise suggested below can be used as a crude sort of diagnostic test by which the teacher can discover the amount of initial proficiency along each line. The first few exercises in each group will also have to serve mainly as demonstrations of these methods of getting the meaning of reading matter. As soon as pupils catch the trick they will develop rapidly. Make them see that these exercises are merely ways of supplementing the reading matter by associating it with other experiences which throw light upon the meaning.

(2) Practice Exercises in Describing What "Pictures", Places, and experiences Come to Mind as the Pupil Reads a Passage

In planning these exercises select four or five appropriate paragraphs from the regular study material and list every pupil experience which you think might be recalled by each selection. Also list every type of experience which you think will throw light upon the meaning of the materials selected. List a few detailed instances in each case. For example, the following pupil experiences would be a partial list for the two main statements in topic 69, page 65, in Lyon's "Soils and Fertilizers":

- (a) Compacting the soil causes water to rise to the surface. Related observations:
 - (1) Water rises to the top of wet sand when the sand is compacted.
 - (2) Water rises in footprints in wet snow.
 - (3) Water rises in footprints in mulched soil.
- (b) Looseness of soil breaks capillary connections and thus prevents rise of moisture. Related observations:
 - (1) Straw thrown over soil keeps it damp.
 - (2) Flat stones, boards, etc., hold moisture in soil.
 - (3) Leaves, sawdust, etc., serve the same function.

At class time have the pupils to read each paragraph and then have various individual pupils to describe orally the experiences which the reading matter suggest to their minds. If they do not mention abundant experiences, supplement their list with additional suggestions from your prepared list. Discuss all suggestions with the class. The discussion

will not only clarify and enrich the meaning, but it will also furnish the pupils with hints useful in meaning getting and thought impressing in other connections.

(3) Practice Exercises in Making Simple Charts, Drawings, etc., to Represent What is Read

Three very important advantages attach to this type of exercise. In the first place, appropriate representation is objective proof of adequacy of comprehension, for the pupil must clearly grasp the thought before he can appropriately represent it. Failure to represent appropriately tends to convince the pupil of the need for better comprehension, for in such a case *he* can see the proof. Such representation also furnishes the teacher with objective evidence of the accomplishments of pupils during silent study. In the second place, the representation of thought serves to clarify the thought by re-organizing it in such a way as to make it more concrete and meaningful to the pupils. In the third place, the re-expressing of the thought in another form involves the process of assimilation through which the material tends to become a part of the pupil's own experience. In fact, it is only as the pupil does something with (re-acts to) the material read that it really becomes a part of him. Note that only *simple* representations are expected. Artistic drawing is not the goal here, but only rough representation which will aid in any one of the ways mentioned above. Do not have the pupils to draw just to be drawing. The drawing

should serve some useful function in connection with comprehension.

In planning these exercises pick out four or five appropriate paragraphs or topics and list the drawings, charts, or other types of representing which you think will serve the functions suggested above. Your plans should include a list of the types of representation which you intend to suggest.

At class time explain to the class what they are expected to do, and demonstrate the procedure in connection with one of the selected paragraphs. Then have them to take each of the other selected paragraphs and represent the parts which need representation for the reasons stated above. After each paragraph is illustrated by the pupils, take up the illustrations and have a class discussion of both the need of representation and the appropriateness and fullness of the representation. If the pupils have not hit upon what you consider the better types of representation, add a few from your own list. So far as possible allow each pupil to use his own means of representation. List and report all types of representation used by the pupils (drawing, charts, pictures, cuttings, modelling, etc.) to represent the thought of the selected paragraphs.

(4) Practice Exercises in Identifying Reading Content With Concrete Personal Experiences

The exercises here suggested differ from those considered in section (2) above, in the fact that the

exercises in this section concern the more concrete and personal experiences which have been more or less purposely carried out for instructional reasons. Laboratory experiments, field trips, and the like are very helpful for this purpose. It is frequently suggested that laboratory experiments, or observations, should precede the textbook study on certain topics. After the experiment is finished, the extended textbook discussion of the same topic is next studied for purposes of verification, supplementation, etc. Such an order of procedure gives an excellent basis for identifying the reading matter with concrete personal experiences, for through such preliminary activities the pupils have already been given an understanding of the matter in connection with concrete materials and they are therefore prepared to follow the textbook understandingly as it gives a more extended discussion of the same topic. Field trips and out-of-school experiences of the pupils may also be used for this purpose.

In planning these exercises select two or three important topics discussed by the textbook. The topics should be selected from sections which are rather closely related to previously performed laboratory exercises, or to previous observations of the class. In addition to listing the related laboratory exercises and observations, list all other personal experiences which any of the pupils have had along lines related to the selected topics.

At class time have the pupils to read each selection and to cite class experiments, observations from

field trips, or other personal experiences which supplement or throw light upon the selection read. Discuss all helpful suggestions. After they have given all the suggestions that they can think of in connection with each topic, you should suggest other experiments and observations from your prepared list. In agriculture and a few other subjects each individual's project or problem furnishes him with the basic materials for the interpretation, for himself and for the rest of the class, of the reading matter closely connected with the project. The class discussions should be used as the means of sharing the benefits of these more extended experiences of different members of the class.

(5) Using Ready-made Pictures, Slides, etc., to Clarify or Supplement Printed discussions

Our schools have only recently been awakened to an appreciation of the value of "visual presentation" as a means of clarifying and supplementing the discussions of the textbook. The prolific use of pictures, diagrams, graphs, and the like, in recently printed books, and the growing use of slides and even motion pictures for educational purposes, attest the great importance now being attached to methods of visual presentation. Pictures, slides, and the like, furnish the nearest substitute for experience with the real object, wherever the particular thing being studied has not been a part of the pupil's real experiences. They also possess the advantages of being permanent and complete, so that they may be referred

to repeatedly while the pupils are trying to make out the thought of the related reading matter.

In preparing for these exercises list all available ready-made representative and illustrative materials which you think can be used in connection with the topics of a definite lesson assignment. Plan and write out just where and how you will use each listed picture, diagram, graph, slide, etc., to clarify or supplement the textbook discussion.

At class time first demonstrate to the class how these ready-made visual aids help the reader in getting the thought more fully and accurately. After demonstrating the matter in connection with two or three topics, take up the planned assignment, topic by topic, and see that all the pupils make full use of each available illustrative material at the appropriate time. This type of study supervision can be carried out in connection with the so-called "study-recitation" in which the material is taken up a paragraph at a time. As you notice lack of comprehension on the part of any pupil, cite pictures, diagrams, slides, etc., which you think will clear up the difficulty. The purpose here is to promote clear thinking based on adequate comprehension. However, it should be understood that these visual devices are to be used not as substitutes for study on printed matter, but rather as material supplementary to such study. Eventually we want the pupils to depend mainly upon their own past experience and power of imagery as the means of such supplementation. Hence, these devices should be used only where they are needed to

add clearness or fullness to the printed discourse, and they should be discarded just as soon as the pupils can get the thought adequately without their aid. This means that the proper place for such devices is in connection with the introduction of unfamiliar topics, or at points where new or more complicated phases of old topics are taken up. This argument applies to the exercises suggested in each of the sections of this chapter.

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CHAPTER VIII

TRAINING IN GETTING THE MEANINGS OF SENTENCES AND PARAGRAPHS

Main Points of the Chapter

1. Pupils should be trained to **emphasize properly the various elements that make up sentences and paragraphs.**

2. Use the **Thorndike-McCall tests** and similar improvised tests for **diagnosis, motivation, and checking up.**

3. Train pupils to **emphasize properly the elements of sentences** by putting them through the following practice exercises:

- (a) Exercises in **telling what the sentence says, asks, etc.**
- (b) Exercises in **selecting the few words which contain the main thought.**
- (c) Exercises in **selecting the one or two most important words.**

(d) **Grouping words to show meaning.**

(e) **Picking out the mere helping words.**

4. Train pupils to **emphasize properly the elements of paragraphs** by putting them through the following practice exercises:

(a) Exercises in **telling what the paragraph says, asks, etc.**

(b) Exercises in **selecting the few sentences most essential to the thought of the paragraph.**

(c) **Picking out the most important sentence or statement.**

(d) **Grouping sentences and clauses so as to show meaning.**

(e) **Picking out the mere helping sentences.**

5. Give pupils much practice in interpreting and carrying out written directions furnished by the teacher.
6. Give pupils practice in doing experiments, constructions, etc., according to printed directions.

1. Introductory Discussion

The purpose in connection with the exercises suggested in this chapter is to get the pupils to emphasize properly the various elements that make up sentences and paragraphs. It has been demonstrated over and over that undue emphasis upon certain words, phrases, or clauses may materially alter the meaning of a selection. The exercises here proposed are for the purpose of getting pupils to form the habit of weighing the elements of sentences and paragraphs.

For the exercises with sentences, select a large number of sentences ranging from very simple to very complicated ones. Write out, or mark, the parts which are appropriate for the exercises of each section listed below. Each sentence may be carried through all of the exercises suggested for sentences. For the exercises with paragraphs, select paragraphs and work up your plans in a way similar to that suggested for sentences. In each exercise see that the pupils emphasize the proper elements and that they understand why such elements deserve emphasis. In the introduction of this book it was indicated that skilful reading is essentially a process of analysis (selecting the appropriate elements) and synthesis (reorganizing these elements so that they mean something to the reader), guided by an impelling purpose.

Hence the importance of the kind of exercises suggested in this chapter.

2. Diagnosis, Motivation, Practice and Checking up

The previous use of the Thorndike-McCall tests has not only shown just where each pupil stood in relation to the class average and grade norms in comprehension, but has also demonstrated one of the best means of testing the accuracy with which the pupils get the thought of printed matter. In connection with a few of your selected sentences and paragraphs make up questions similar to those of the Thorndike-McCall tests. Use these as improvised tests for one or two periods, following the same procedure as with the Thorndike-McCall tests. Throughout the term, occasionally assign a lesson by giving the class such a list of questions on definitely assigned paragraphs. (Similar suggestions are taken up in detail under Chapter IX). Such exercises aid the pupils by giving definiteness to their quest for thought.

3. Practice Exercises in Properly Emphasizing the Elements of Sentences

These exercises will be discussed under the following five groups: (a) Having pupils to tell what the sentence says, asks, etc.; (b) Picking out the few words which adequately express the thought of the sentence; (c) Picking out the one or two words most essential to the thought; (d) Grouping words and phrases to show the meaning; and (e) Picking out the

mere helping words. Take up a sentence and carry it directly through all these types of exercise. Then take up another in the same way. Keep up the practice until you have exhausted your selected sentences, or until you are satisfied that further class drill is not necessary. Then make special provision for individual drill for pupils who are weak in these exercises.

(a) Practice exercises in telling what the sentence says, asks, etc.: As the introductory step in training pupils to emphasize properly the elements of sentences have the pupils to read each sentence silently and then to close their books and tell what the sentence says. After several of the pupils have told, in their own words, what the sentence says, use the same sentence in the exercises which follow.

(b) Practice in picking out the small group of words which quite adequately express the thought: Quite often three or four (at least a few) words express quite adequately the essential thought of the sentence. Using the same sentence as above, have the pupils to practice locating (and sometimes underlining or noting down on the paper) the small group of words which alone would quite adequately express the thought of the sentence.

(c) Practice in picking out the one or two words which are most essential to the thought of the sentence: After locating the small group of words which fairly adequately express the essential thought of the sentence, have the pupils to find the most im-

portant word, or words, in such group, and to explain the reason for their choice.

(d) Grouping words and phrases to show meaning: Bringing together words or phrases which supplement, modify, or re-inforce the meaning of one another is very helpful in getting the exact meaning of a sentence. In practicing such grouping pupils may use either simple word grouping or a simple form of sentence diagramming. In either case see that the grouping shows the relationships of the words. Where pupils have already been trained in diagramming sentences, this kind of exercise is easy. Do not waste time on useless diagramming, but discontinue this kind of practice as soon as the majority of the class become reasonably proficient in it.

(e) Practice in picking out the mere "helping" words: Showing the pupils that most of the printed words serve merely as helpers or aids to the main words assists the pupils in selecting the essential words. They need to know that, if they can hold in mind the main words, they can easily fill out the helping words from their own vocabulary. The exercises suggested above have made it easy to locate the helping words in the sentences here used. As far as selecting is concerned, selecting the helping words is only the negative side of the practice in choosing the essential words. The special importance of this practice comes to view when we are reviewing, or trying to reproduce the thought from memory. For instance, an outlined point may contain only one or two main words and we have to supply the balance of the words

as we review the outline. The same is true when we are reviewing material in which the main words have been underscored. Give the pupils some practice in filling out sentences when only the two or three main words are given. Start with the sentences which they have been using above, but also introduce some new sentences. Discontinue this kind of practice as soon as the majority of the class develop reasonable proficiency in it.

4. Practice Exercises in Properly Emphasizing the Elements of Paragraphs

These exercises will be discussed under essentially the same five steps as employed in connection with sentences. The general procedure is the same as for sentences.

(a) **Having pupils to tell, in their own words, what the paragraph says, asks, etc.:** Using your selected paragraphs, carry out exercises similar to those used with sentences under section (a). Carry the same paragraphs through all of the exercises below.

(b) **Picking out the few sentences or clauses which quite adequately express the essential idea of the paragraph:** With each paragraph follow a procedure similar to that used with sentences under section (b).

(c) **Picking out the most important sentence or statement of the paragraph:** Plan and carry out practice exercises similar to those used with sentences under section (c).

(d) **Bringing together the sentences or clauses so as to show real meaning:** Bringing together the sentences or clauses which supplement, modify, or re-inforce one another helps to clarify and organize the meaning of the paragraph. For this purpose it is best to use a simple form of outlining, though mere grouping of sentences will often give good results. A good outline shows by its organization the relation of its elements, and thus aids in getting the total meaning.

(e) **Picking out the mere helping sentences:** With each paragraph follow a procedure similar to that used with sentences under section (e).

5. Practice Exercises in Interpreting and Carrying Out Written Directions Furnished by the Teacher

The exercises suggested in this section, and in the section which follows, furnish an indirect measure of the effectiveness of comprehension. Instead of asking the pupils to give the main thought, we ask them to show, by what they do, that they have comprehended the directions. Failure to succeed sends the pupil back to the directions for digging out the thought. Success in carrying out the directions tends to emphasize the essentials which bring success.

The assignment of work probably furnishes the best occasion for using exercises which involve carrying out your written directions. Work out written directions for two or three brief class exercises. At class time write the directions on the board and ask

the class to do what the directions say. Observe to see wherein individual pupils fail to get the right meaning of the directions. Help the individuals only when it seems that they can not get the directions for themselves. Before helping them, make sure that they have really made an effort to get the thought. Possibly it is well to let them make a few mistakes so that they may see wherein their comprehension has been inadequate. Then see that the mistakes are corrected and demand better reading next time. In the follow-up work, occasionally write out the whole lesson assignment on the board and require the class to carry out the directions without the aid of oral explanations. Make sure that the directions are not ambiguous. Check errors as quickly as possible and use each error as the signal for impressing upon the pupil the need for more careful reading. Observing and individual questioning should be used freely as means of keeping tab on this kind of work.

6. Practice Exercises in Doing Experiments, Constructions, etc., According to Printed Directions

These exercises will be much like the preceding type, but will be more extended and probably more complex in nature. There are several sources of exercises of this type. The laboratory manual in the sciences, printed directions for making constructions, and printed directions frequently found in bulletins and magazines may be used for these exercises.

Select directions related as closely as possible to

the regular class work and plan just how and when you will use them. At class time allow the pupils to assume the responsibility for interpreting and carrying out the printed directions, but, as in the preceding section, constantly watch to discover and correct errors in interpretation, before too much time is lost and too many errors made through wrong interpretation. Carry out this kind of exercise until the majority of the pupils become able to get the directions correctly. As stated above, the main advantages of exercises in carrying out printed or written directions lie in the fact that the objective results are more convincing than the results in the ordinary type of recitation, and in the fact that such directions remain unexecuted until the pupil makes the proper interpretation of the directions. Within reason, the answer to failure to do the thing described should be: "Read the directions more carefully".

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CHAPTER IX

TRAINING TO READ UNDER THE GUIDANCE OF A DEFINITE PURPOSE

Main Points of the Chapter

1. Pupils must be brought to **realize the value of reading for definite purposes**. This can be accomplished through the use of the following practice exercises:

(1) **Showing each pupil his deficiencies** in connection with each of the exercises suggested below, and then appealing to him to strive to reach progressively higher standards.

(2) **Discovering that each well organized unit of reading matter answers some definite question.**

(3) **Preliminary stating of just what the pupil "expects"** to get from reading a proposed topic.

(4) **Listing the important questions answered by the selection.**

(5) **Stopping occasionally to anticipate what is to follow next.**

(6) **Listing the questions and queries that suggest themselves as the pupil reads.**

(7) **Locating the parts of the selection which accurately answer definitely stated questions.**

(8) **Preparing lessons under the guidance of definite questions or problems.**

2. **Summary of Part II.**

1. Introductory Discussion.

The kind of training suggested in this chapter is closely related to that discussed in Chapter V. The present chapter emphasizes the dynamic and selective

value of reading under the guidance of a well conceived purpose, in contrast to aimless reading.

The value of a well conceived purpose needs some discussion at this point. A well conceived purpose not only furnishes a dynamic drive which makes the reader pursue his quest more assiduously, but it also acts as a criterion by which to select or reject thought elements. Thoughts which are in any way, positively or negatively, related to the purpose for which one is reading all the more readily start associative processes which result in bringing the particular thoughts before the focus of conscious attention where they are judged and accepted, or rejected, in accordance with their relation to the primary purpose in mind. In other words, focusing the mind upon a definite purpose tends to make all relevant ideas strike in unison with that purpose. The ideas which start up neural processes in unison with those already functioning in the mind bring themselves into clearer consciousness because they supplement or unite with the original processes. The analogy of the interaction of tuning forks upon one another will throw light upon the interaction of ideas upon one another. By analogy, focusing the mind upon a specific purpose is like "tuning in" on a wireless wave. In both cases the mechanism is set in unison with the thing it is desired to intercept. When the thing, to which we have tuned the mechanism, plays its role, our mechanism sets up a sympathetic vibration process. In the nervous system we have stimulation of similar nervous paths which sets into operation the so-called associative pro-

cesses. On the negative side, those ideas which are not closely related to the neural processes at work in the mind fail to arouse any sympathetic nervous reaction, just as the vibrations of a tuning fork fail to produce sympathetic vibrations in an "un-tuned" fork. So we find that aimless reading tends either to attach equal significance to all thoughts or to result in a haphazard emphasis upon whatever appeals to the spontaneous interest of the moment, with the result that selective reading is impossible.

The exercises now to be suggested are intended to impress upon the pupils' minds the great value of purposive reading.

(1) Diagnosis, Motivation, Checking up, etc.

Any of the exercises suggested below may be used for either diagnostic or checking up purposes. The deficiencies discovered can be used as the basis for appealing for greater effort on the part of individual pupils.

**(2) Practice in Discovering That Each Well Organized Unit of Printed Matter Answers
a Definite Question**

In these exercises, the purpose is to show the pupils that all well organized reading matter is purposive. A very few exercises should be sufficient to demonstrate that fact.

In planning these exercises select several paragraphs from your textbook and write out the question which must have been foremost in the author's mind as he was writing each paragraph.

At class time demonstrate to the Class that one of the selected paragraphs is the author's answer to a definite question. Then help them to discover that the same is true of each of the other selected paragraphs. In connection with each paragraph the pupils should ask themselves what question or problem the author is trying to answer. Pupils should get the notion that printed material consists largely of authors' answers to questions which the reader usually desires to ask along certain lines.

**(3) .Practice in Stating, in Advance of Reading,
Just What the Pupil "Expects" to Get
from Reading the Proposed Topic.**

This type of exercise is intended to focus the pupil's attention upon the problem or purpose for which he is reading, so that selection of thought may be more discriminate.

After calling attention to a selected topical heading, have the pupils to "guess" what the paragraphs will say. Then have them to read the paragraphs and either verify or correct their guesses. Do the same with several selected paragraphs. Here the purpose in the mind of each reader is to establish or refute his own stated notions relating to the topical heading of the paragraph. Reading with such a purpose in mind tends to give more point to the thoughts encountered. As a pupil comes to a topical heading, he should review his own knowledge along the line of the topic before taking up the reading of the full

paragraph. This secures a more adequate functioning of the apperceptive and selective processes.

(4) Practice Exercises in Listing the Important Questions Answered by the Selection

This type of exercise is really a continuation and expansion of the type of exercise discussed in section (2) of this chapter. It reverses the usual order of working from a stated question to its answer, by requiring the pupil to work from the answer back to the appropriate question. It doubtless requires much keener mental activity to formulate a good question on a paragraph than to take a definite question and find the answer by reading. Yet, both of these activities involve comprehension.

After the pupils have been convinced that the author is answering potential or real questions, give them some practice in listing such questions. While doing this they will doubtless get a better understanding of both the questions and the answers. Such exercises will also furnish an occasional welcome variation from the usual order of question first and answer following, and will at the same time encourage a very useful type of reflection.

(5) Practice Exercises in Stopping Occasionally to Anticipate the Following Material

This is the typical procedure when we stop in the midst of our reading to guess how the story will come out, or wonder why a particular character or element is introduced by the author. We are trying

to think the author's thought ahead of him. Such exercises involve an active state of mind very essential to good comprehension.

Select a few paragraphs and plan just where you will stop the reading for anticipatory questions in connection with each. At class time carry through a few such exercises. At first you may have to suggest the questions, but this responsibility should be shifted to the pupils very soon. Follow up each pause with further reading in which particular attention is devoted to finding the answer to the stated query.

**(6) Practice Exercises in Listing the Questions,
Queries, etc., that suggest Themselves
as the Pupil Reads**

This type of exercise differs from the preceding type mainly in the fact that we here emphasize a state of mind active in discovering problems, rather than in anticipating the author's trend of thought. Both involve "reading to react to" the material read, by scrutinizing it for suggestions.

Select a few appropriate paragraphs and require each pupil to list all questions, etc., suggested by each selection. Discuss each relevant question, as a means of problem raising.

**(7) Class Exercises in Finding the Parts of the
Selection Which Accurately Answer
Definitely Stated Questions**

A well chosen question is one of the most effective means of directing selective reading. But, questions used for this purpose must be carefully

stated so as to direct the pupils' attention to the essential thought.

Select six to ten paragraphs and carefully state three or four questions specifically answered in each. List the paragraphs and the questions and indicate the line affording the answer to each question.

At class time take up each of the questions with the class to see who can first find the particular line, word, phrase, or sentence containing the answer. Verify, or supplement, the findings of the pupils by comparing the findings with the lists in your lesson plan. When the part of the paragraph containing the answer is located, have the pupils to examine it and to state the answer in their own words. This type of training should be begun under the direct supervision of the teacher. As soon as possible throw upon the individual pupils the full responsibility for finding and interpreting the sections containing the answers, but continue to check up their work at frequent intervals.

(8) Practice in Preparing Lessons Assigned in the Form of Definite Questions or Problems

This type of exercise is a further extension of the preceding type of exercise and furnishes one of the most effective types of lesson assignment. After some practice on the exercises suggested in section (7) above, the pupils should be able to prepare whole lessons under the guidance of appropriate questions which the teacher gives them when the lessons is assigned.

For introducing this type of exercise take the amount of textbook material usually assigned for one lesson and work out good questions (mostly thought questions) covering the main points of the material. At assignment time point out the topics and give the class the questions. At the following recitation time take up each question and carefully check up and discuss the various answers submitted. Some of the checking can be done through oral discussion in which various pupils take part, but you may find it advisable to collect the papers and look them over occasionally. Sometimes the oral discussion of the pupils' answers should be immediately followed by re-reading and correcting of papers by the pupils. Allow no writing while the questions are being discussed, for each pupil is expected to profit from the suggestions of other pupils.

This type of assignment is considered one of the most effective means by which the teacher can direct the selective reading of the class. It sets up definite purposes or goals which guide the pupil in his selecting, organizing, and remembering, and at the same time it adds the element of satisfaction when the pupil finds that he has reached the stated goal. This feeling of success is very valuable in spurring pupils on to greater efforts in the face of difficulties. You will find it profitable to use this type of assignment quite frequently. The questions used should vary in form from the simple type which merely requires the pupils to find a statement in the book, to the comprehensive type of thought question which requires re-

flective thinking and reorganizing of materials for its answer. As pupils develop, use the thought type more and more.

2. Summary of Part II

Let us here summarize the training suggested in connection with the specific problems in comprehension. As was indicated in the summary at the end of Chapter VI, the exercises suggested in Chapter V and VI were used to develop better control of attention in reading and study. In Chapter VII exercises were suggested for bringing into operation certain psychological processes which serve as powerful aids to meaning getting. In the suggested exercises, recalling related past experiences and utilizing visual aid in the presentation of material were most stressed. In Chapter VIII exercises were suggested for developing proficiency in properly emphasizing the thought-giving elements in sentences and paragraphs. Finally, in Chapter IX exercises were suggested for developing proficiency in selecting and organizing points under the guidance of definite questions.

In Part III certain general methods of summarizing, outlining, and reviewing will be taken up.

References

1. McMurry, F. M. **How to Study and Teaching How to Study**, 1909, Chapter III (Provision for specific purpose).
2. Earhart, L. B. **Teaching Children to Study**, 1909, pp. 21, 61, 84-85, 117, 145-49 (Recognition of the problem).

PART III

ORGANIZING AND IMPRESSING THOUGHT

CHAPTER X

TRAINING PUPILS TO PAUSE OCCASIONALLY FOR SUMMARY AND CONNECTIONS

Main Points of the Chapter

1. Pupils must be brought to see the value of frequently summarizing as an aid to clarifying the thought and establishing a thorough re-organization of the material, so that recall is facilitated. The following practice exercises can be used to bring out the value of summarizing:

(1) Showing the pupils the relationship between defective outlining and defective thought getting.

(2) Guided practice in reviewing and summarizing at proper intervals.

(3) Practice in making outlines as an aid to lesson preparation.

2. At the end of the specific drive on summarizing, the pupils should be given improvised tests for checking up the degree of proficiency gained in outlining and in reproducing the thought after studying their own outlines.

1. Introductory Discussion

An occasional pause for summarizing and for noting the interconnections of the reading matter is

useful not only for the purpose of getting the meaning and clarifying the thought, but also for establishing a more thorough re-organization of the material in the reader's mind, so that recall of the material is facilitated. During such pauses the reader must temporarily disregard the "filling-in" material and take a look at the organized skeleton of essential points with a view to impressing the organized whole on his mind. This type of activity is especially important for the immature reader who has not yet acquired facility in selecting and organizing thought elements. Even the mature student finds it advantageous to make at least a mental summary at the end of each unified group of thoughts. The frequency and length of these pauses depend upon the character of the reading matter and the purpose for which one is reading. Light reading matter, such as is found in novels, requires little or none of this type of activity, but heavy reading matter with many or complicated thoughts may require frequent pauses in order to maintain our bearings. Only a few types of exercises will be suggested here, but it is hoped that you will find it possible to add other types.

(1) Diagnosis and Motivation

Pick out two or three topics which readily lend themselves to outlining, and work out four or five good questions on each. At study time assign the topics for study and outlining. Ask the pupils to pick out the main points and important sub-points and arrange them so as to show the relationship of

the points selected. When all have finished at least two topics, set a specified time for studying the first topic. At the end of that time require the pupils to hand in their outlines on the first topic, close their books, and write out the answers to the questions. Do the same with each of the other selected topics. Do not suggest the questions until books are closed and outlines are out of sight. It is probably best to put the questions on the board and keep them covered until the outlines are collected. At the beginning of the next recitation period, show the class how many questions were correctly answered and, where possible, relate the correctness of the answer to the quality of the outlining. In this way point out the utility of outlining, and then appeal to the pupils to struggle to improve their outlining proficiency in connection with the exercises suggested below. File away the original outlines and answers for later use.

**(2) Study Recitations Using Guided Practice in
Reviewing and Summarizing at
Proper Intervals**

In planning these exercises select five or six consecutive paragraphs of a regular lesson assignment, and write down the main points under each topic. Put these in brief outline form, properly indented to show the relationship between the parts (Note how subdivisions are arranged in outlines found in books).

At the class period have the pupils go through the first topic in the assignment, noting the main points. When they have thus gone over the whole

topic, start them over it again, and as they come to each main point or important sub-point place it on the board in proper outline form. See that the points are carefully arranged so as to show which are the main points and which the supporting points. The points should be so stated as to carry the full content meaning. For instance, instead of saying "time of planting", put it "plant in May". Finally, review the outline, carefully noting the inter-relationship of the parts. Similarly take up each of the other topics and outline them on the board as the pupils discuss the points. Make sure that the organization of the board outlines is good. Refer to your own prepared outline whenever necessary. However, pupils should have a hand in reorganizing the points in their proper relationships, for this gives them excellent training. You should use your outline for suggestions and guidance, but you should not hesitate to vary from it when pupils give good reasons for a different organization. As soon as possible, pupils should assume practically full responsibility for suggesting the arrangement of the points in the outline. When the outline is completed for each topic, review it and note the relationship of the parts. Where two or more successive topics deal with closely related matter, review their outlines together so as to establish the connections between the topics. Use frequent reviews to keep the organization of chapters, or larger units, clearly in mind.

The above exercises have been suggested for the purpose of acquainting the pupils with suggestive

methods of reviewing, summarizing, and outlining. After you have thus shown pupils how to summarize and outline, give them much supervised practice in outlining, so that they may learn to outline with facility. When they have acquired some facility and independence in outlining, they are ready for the exercises to be suggested under section (3) below.

(3) Practice in Making Outlines During the Study Period, as the Means of Keeping the Material and Connections in Mind

In carrying out the preceding exercises the pupils have discovered how to use outlining as the means of summarizing the points of a paragraph or topic. Eventually they should develop skill in "mentally" summarizing and reorganizing the points without having to resort to writing out the points first. But as that goal is far ahead for most pupils, you should now center your attention upon giving them training in the use of note-taking and outlining as aids in independent lesson getting. After a pupil has once carefully read through the discussion of a topic and has made a good brief outline of its main points, it should not, as a rule, be necessary for him to read through the whole bulk of the discussion a second time. In reviewing his outline he should go over the points and think out their discussion for himself. Of course, when he has trouble recalling the essential discussion connected with any topic or point, he should again consult the textbook for clarification. The outline should contain the words or brief state-

ments which the individual pupil judges will best recall to his mind the essentials of the discussion. At first have the pupils to write rather full statements; later encourage briefer statements. A statement is not too brief as long as it surely stimulates the recall of the required thought. The outline should frequently be memorized, but the whole discussion should rarely ever be memorized.

For several recitations require the pupils to prepare the lessons by first outlining the topics of the assignment and then studying their outlines by trying to think out the discussions, as suggested above. At class time use a method of reciting which will emphasize the utility of reciting from an outline. The following procedure will be found to be good: Have one pupil to put on the board his outline for the first topic, another pupil to put on the board his outline for the second topic, and so on for all the more important topics of the lesson. Then have each pupil to discuss the points listed in his outline. Next correct and supplement his outline and discussions by the aid of suggestions from the other members of the class. When through discussing each topic, see that the points are written in good outline form, and have the pupils to copy the outline for use as a model in connection with later outlining. Let the whole group of corrected outlines show a completely unified outline of all the topics of the lesson. Always review the corrected outlines in order to fix in mind the essential facts and connections. Sometimes have the pupils to hand in their original outlines for your in-

spection. Examine these outlines carefully to find wherein individual pupils are having difficulty. Give special attention to those pupils needing help. Where a difficulty is common to most of the members of the class, take it up as a class affair. Provide additional work or library reading to keep the bright pupils usefully occupied during the time that special attention must be devoted to the weaker members of the class. Finally, it should be repeated that as pupils develop they should more and more frequently be urged to make *mental summaries* as they study. Such summarizing, both written and mental, not only clarifies the meaning and establishes the interconnections of the points but also gives the psychological advantages accruing from frequent repetition while the materials and connections are yet fresh in the mind.

2. Checking up Results

At the end of the special drive on the exercises suggested in this chapter, you should check up the pupils' proficiency in outlining and in reproducing the thought after studying their own outlines. For this purpose select two or three topics which readily lend themselves to outlining, and work out four or five good questions on each.

At study time assign the selected topics and give the usual instructions for outlining. Start the pupils on your selected topics first, but assign enough additional topics to keep the faster pupils busy until the others have finished the special topics. Have them to use a separate sheet for each topic and urge them to

study the material carefully and make a good outline. When all the pupils have finished outlining the two or three special topics, set a specified time (one to three minutes, depending upon the length and difficulty of the particular topic) for studying the first topic. At the end of the specified time require the pupils to hand in their outlines on the first topic, close their books, and then write out the answers to the questions. As suggested in section (1), do not suggest the questions until the books are closed and the outlines are out of sight. Put the questions on the board, as suggested in section (1) above. Collect the answers and then follow a similar procedure with each of the other special topics.

In treating the results, first compare each pupil's outline with his outline made in connection with the exercise of section (1) above, to see whether there is improvement in the character of the outline. Then determine the number of questions correctly answered by each pupil, and compare the number with the corresponding results obtained in connection with the exercise of section (1) above, to see whether there has been improvement in the degree of mastery of the material. Unless the material used in this section is like that used in section (1), the results obtained in the two cases will not be strictly comparable. Provide for this comparison by selecting material that is similar in nature and difficulty to that used in section (1).

References

1. McMurry, F. M. **How to Study and Teaching How to Study**, Chapter V (Organization of ideas) and pp. 168-78, 185-90 (Memorizing through thinking).
2. Earhart, L. B. **Teaching Children to Study**, 1909, pp. 16, 37-40, 73, 87-88, 115, 152-54 (Organizing and impressing ideas).
3. Peterson, Joseph. **The Effect of Attitude upon Immediate and Delayed Reproduction**, *Journal of Educational Psychology*, VII, Oct. 1916, p. 253 (Active attitude).
4. Stone, Clarence R. **Silent and Oral Reading**, 1922, pp. 183-89 (Outlining).
5. Parker, S. C. **Methods of Teaching in High Schools**, 1915, pp. 407, 410-12 (Outlining in study).

CHAPTER XI

FINAL TESTING, AND TAKING STOCK OF THE ACCOMPLISHMENTS OF THE ENTIRE COURSE UP TO THIS POINT

Main Points of the Chapter

1. At the end of this course the teacher should take stock of the accomplishments of the training, and of the remaining deficiencies and problems.

2. For final testing a third form of the three tests previously used should be given.

3. Scores should be computed and reported as in the previous testing.

4. Take stock of the training by giving: (1) Comparative scores for the different testings; (2) Discussion of results for the class as a whole; (3) Special account of exceptional pupils; (4) Your critical estimate of the value of each type of exercise; (5) Projected plans for following up this training.

1. Introductory Discussion

At the beginning of this course you gave three standardized reading tests through which you discovered certain deficiencies in rate of reading and in degree of comprehension on the part of your pupils. During the course you gave a second form of each of the three tests, in order to get a measure of the pupils' progress and an idea of the character and

extent of the deficiencies remaining after specific training along certain lines. Now, after finishing the drives on the various specific types of training, you are asked to give another form of the same three tests, and to compare the results here obtained with the results obtained in the preceding testing. The directions for giving the tests are exactly the same as before. The materials needed are listed below.

2. Final Testing

(1) *Thorndike-McCall Reading Scale*. For giving this test the following three kinds of materials are needed:—(a) Thorndike-McCall Reading Scale, form 3 (One copy for each pupil); (b) Tabulation and Graph Sheets to match (Two or more copies for each class); (c) Directions Sheets to match (One copy for the teacher). Give and score the tests exactly as in the preceding testing with this scale.

(2) *Monroe's Standardized Silent Reading Test* For giving this test the following two kinds of materials are needed:—(a) Monroe's Standardized Silent Reading Test, Revised, Test 2, Form 3 (One copy for each pupil); and (b) Class Record Sheet, Form 3 (Two or more copies for each class). Give and score this test exactly according to the directions printed on the back of the Class Record Sheet.

(3) *Courtis Silent Reading Test*. For giving this test the following three new kinds of materials are needed:—(a) Courtis Silent Reading Test No. 2, Form 2 (One copy for each pupil); (b) Individual Record slips to match (One slip for each pupil); and

(c) Duplicate Class Record Sheet to match (One or more for each class). The two directions folders listed for the preliminary Courtis test are also used here. Give the test and score the results exactly as in the preceding testing with the Courtis test.

3. Report on Final Testing

Compute the scores and record them on the appropriate score sheets, as in the preceding testing. Send us duplicate copies of the score sheets, but keep the test sheets on file for further study.

4. Taking Stock of the Entire Course up to This Point

In the general directions, given in Chapter I, it was suggested that at the end of the special drive on each type of training you should write out a general account of your experiences with the particular type of training. It was also suggested that at the end of the course you would be expected to give a critical account of your experiences with each type of exercise used during the course. Since finishing the special drive on each type of training, you have doubtless used each type a greater or less number of times and have viewed it in its relation to the whole course. Now you are expected to take stock of the whole course up to this point, and to give a critical account of your experiences with each type of exercise. The results of your survey and evaluation should be shown in a careful report on each of the following five items:

- (1) A *table* showing, side by side, the *individual*

and *class results* for all *three testings* with each kind of test; and showing the *gain or loss* with each testing, reckoned from the results of the preliminary testing as the basis.¹

(2) A *discussion* of the results for the class as a whole, as shown in the tabulated results and in the teacher's observations of the class work. Give any *explanations* which will throw light upon the accomplishments of the training.

(3) A *separate account* of the results obtained with *exceptional pupils*. Give all facts and explanations which you think will throw light upon these cases.

(4) A *critical statement* of your estimate of the *value* of each of the suggested types of exercises for training pupils in study and assimilative reading.

(5) A statement of your *projected plans* (in addition to those suggested in Chapter XII) for following up this training, so as to maintain and further develop the proficiency attained in the various lines.

References

See references listed in Chapter II.

¹ The writer has prepared a Special Tabulation Sheet for recording and reporting these test scores for the whole class. The sheets may also be modified for the use of individual pupils in keeping the weekly records suggested on page 32.

For keeping the class scores you need four sheets. For the individual pupils scores you need one additional sheet per pupil.

Prices: 4 sheets 10c; 10 sheets 20c; 20 sheets 30c; 50 sheets 70c; 100 sheets \$1.20.

CHAPTER XII

FOLLOW-UP TRAINING IN FITTING THE TYPE OF STUDY PROCEDURE TO THE TYPE OF STUDY MATERIAL

Main Points of the Chapter

1. Train pupils to fit the type of study procedure to the type of material by means of the following exercises:

(1) **Reviewing and discussing** each of the more important **study procedures** used during this course.

(2) **Class discussions** of the types of **study procedure appropriate** for each of the more important types of study material.

(3) **Practice in using the selected types of study procedure on the selected types of material.**

2. **Reporting.**

1. Introductory Discussion.

After the pupils have learned how to use each specific type of study procedure in the appropriate situation selected by the teacher, their next problem is to acquire facility in selecting and using the several types of study procedure appropriate for each type of material studied in the particular subject. In planning the exercises suggested in this chapter, first make a thorough survey of the textbook and references and list the several types of material most frequently studied in connection with the subject. Select several paragraphs from each type listed, and

then list the several types of study procedure which you think most appropriate for each. List only those types (from this book and the references) which you think can be used advantageously in mastering the selected material. Determine where and how each study type should be used. The general exercises suggested below require a re-examination and evaluation of each main type of study, and thus furnish a valuable review of the course.

(1) Reviewing the Study Procedures

List on the board each of the more important study methods used in this course, and at class time review and discuss the list before taking up the next section.

(2) Class Discussion of the Study Procedures Appropriate for Selected Paragraphs

Now assign one of your selected paragraphs for study. When the pupils have finished studying the paragraph, take up and discuss the various study procedures used by various pupils. Relate the methods used to the listed types of study. See that the advantages of each type are fully discussed, but do not dictate the type to be used. Similarly treat one paragraph from each selected type of material.

(3) Practice Exercises in Using the Selected Types of Study on the Appropriate Type of Material

Using the rest of your selected paragraphs, give the class much practice in using the study procedures

agreed upon as most appropriate for each type of material.

2. Reporting

The writer does not deem it best to *require a detailed* report on the exercises suggested in this chapter, because such reporting would be very burdensome at a time when the teacher is already over-burdened with the duties incident to rounding up the work of the year. However, a general report on your experiences with this part of the course is desirable.

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